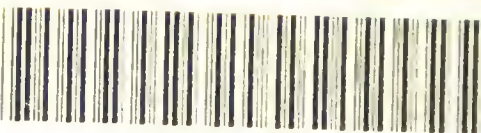
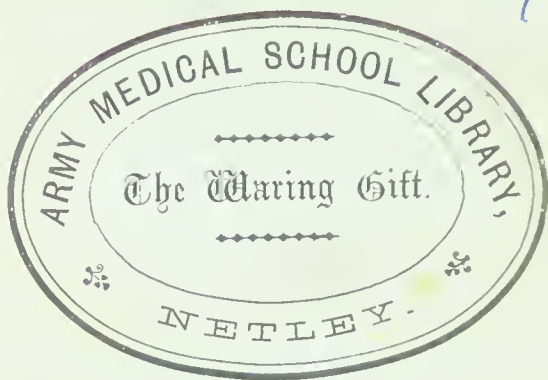


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HINTS

FOR

THE GENERAL MANAGEMENT

OF

CHILDREN IN INDIA,

IN THE

ABSENCE OF PROFESSIONAL ADVICE.

By H. H. GOODEVE, M.D., F.R.C.S.L.

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SURGEON BENGAL ARMY.

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DEDICATED
TO HIS PATIENTS
BY
THEIR FRIEND,

The Author.

Calcutta, March, 1844.

PREFACE TO THE FOURTH EDITION.

IN bringing before the public another Edition of Dr. Goodeve's valuable little work (which is more in demand than ever,) the Publishers have the pleasure to announce that it has undergone a most careful revision, and an addition has been made of several fresh Chapters,—two of which, those on the subject of **POULTICES** and **FOMENTATIONS**, have been extracted from that invaluable work of the celebrated Dr. South, entitled **HOUSEHOLD SURGERY**,—a little Book without which no Domestic Library can be complete.

PREFACE TO THE THIRD EDITION.

WHEN I published the Second Edition of this book in 1844, a few months before I retired altogether from professional life, I had reason to suppose that long ere this time it would have been superseded by some more efficient work of the kind. This I understand has not occurred, and whilst the former editions are out of print, a demand for the book itself continues. Some spurious copies having in consequence been produced in the meantime, I have complied with my Publishers' request to bring out another, and I hope an amended edition of my own.

London, October, 1852.

PREFACE TO THE SECOND EDITION.

THIS little work was printed originally for *private* circulation only. It was intended to supply, in a more convenient form, the place of certain written directions I was accustomed to give my patients.

By mistake, a well meaning friend, without my knowledge or desire, noticed its existence in one of the public papers. The result was a demand upon the book-sellers in Calcutta for copies, which they were not at liberty to supply, and they have requested me to permit a *public* edition to be produced; for it appears that a book of the kind is much required. To this arrangement I have consented, though, I confess, somewhat unwillingly, as I believe the work is scarcely worthy of a more important position than that originally destined for it to assume.

It may, however, supply to a certain extent, the present deficiency in the Indian nursery; and imperfect as it is, it may occasionally prove useful, until its place is supplied by some abler writer, an event, which, for the sake of the public, may, I trust, speedily occur.

September 1, 1844.

ORIGINAL PREFACE.

IN offering these few pages to my patients, I do not, for a moment, pretend to give them a complete treatise on children's diseases. Nor do I wish, in any way, to prevent their taking medical advice, where it can be obtained. On the contrary, I would earnestly caution them never to trust to their own judgment, when they can procure professional assistance. The observations and advice contained in this little pamphlet, are intended, merely to aid those (a large class in India) who are placed at a distance from the advice of medical practitioners: and if this work prove beneficial in a single case, I shall be amply repaid for the time I have bestowed upon the subject.

Calcutta, March 15, 1844.

MANAGEMENT OF CHILDREN.

PRELIMINARY OBSERVATIONS.

IN all diseases of children, it must be remembered, that the two most fertile sources of complaint, and at the same time the most frequent aggravation of other diseases, are teething and irritation of the bowels, the latter generally arising from improper food or indigestion. Therefore, the mouth must always be well examined, and the gums lanced freely, when there is the remotest cause to apprehend that teeth are coming through. Next, the bowels must be well cleansed out before other medicines are administered, and the strictest attention paid to the diet at all times.

The chief dangers in the progress of children's diseases are, a tendency to inflammation in the stomach, lungs, and brain; and a liability to sinking from apparently trifling causes. Hence we must always be on the watch for the former, and be prepared to combat it with leeches and purgatives when it arises, but we must, at the same time, recollect, how easily children are pulled down by severe evacuations of any kind, especially by bleeding and undue purging. In

the management of all these diseases, even during their continuance, therefore, children require more proportionate nourishment than adults under similar circumstances.

Another peculiarity of children is, the facility with which they are affected by opium. Young children, at the breast, have been poisoned by a single drop of laudanum.

No diseases are, perhaps, so rapidly benefited by change of air as those of children. A very few miles' journey is often sufficient to prove exceedingly beneficial, in protracted complaints, which have resisted every other remedy; more particularly those of the lungs, diarrhœa and dysentery. The sea especially, possesses a peculiar charm, and if possible, should always be resorted to where diseases prove uncontrollable by medicine. This remark is quite as applicable to *native* children as to those of European or mixed birth.

It is almost unnecessary to add, that amongst the two latter classes, certainly, many diseases of this kind are incurable, except by sending the child to *reside* in a cold climate free from all tropical influence whatever.

GENERAL MANAGEMENT

OF

CHILDREN.

WHEN the newly born child has been washed and dressed, it is customary to administer to it a tea-spoonful of castor oil, and though this is objected to by some authors, it is, in this country at least, a very useful proceeding; for, the mother's milk, which is sometimes regarded as sufficient to purge the infant, does not generally appear till the third or even the fourth day. The oil may be repeated occasionally, say every two or three days at first, but the practice of administering a dose every morning for months together, is very reprehensible. If at any time the child's bowels are confined for more than twenty-four hours, or it is restless and uneasy from griping, a mild aperient should be given and repeated if necessary.* Cas-

Infants
castor oil
at first.

* Under ordinary circumstances an injection of warm water mixed with soap or sweet oil will frequently suffice, or the introduction of the pawn stalk practised by the native nurses may be employed. For cases of habitual costiveness, these methods are preferable to the constant administration of purgatives.

Constant
purgatives
to be
avoided.

Grey
powder.

tor oil,* in a little warm sugared water, answers this purpose, and if there be much griping or wind, a drop of aniseed oil and two of eal volatile may be added to the dose. If the motions are sour and lumpy or greenish, the rhubarb and magnesia or red mixture† should be substituted for the oil; and for older children the syrup of senna may be used; but carefully avoid the practice of constant purgatives which nurses are so fond of, and especially abstain from mercury, in the shape either of calomel or grey powder, unless there is some decided necessity for it by the presence of actual diseases. Occasionally, it is true, a dose of grey powder with ipecacuanha may be required; for instance, where the ordinary aperients do not relieve the child from griping and uneasiness, and the motions continue for two or three days lumpy, and green and sour, in spite of the effects of the red mixture. Under these circumstances three grains, or at most four, of the

* A teaspoonful every four hours till it operates.

† *Vide* page 87. Under these circumstances great advantage is often obtained by giving one or two grains of plain magnesia twice daily. For similar derangements of the infant's bowels the following powder often proves beneficial: rhubarb, prepared chalk, cinnamon powder, each one grain, twice or thrice daily, and where the motions are very loose and watery and frequent, half a grain of Dover's powder may be added, or the chalk mixture (page 50) substituted.

grey powder, combined with one grain of James's powder, will often improve the state of the bowels at once. Where there is slight fever present, this dose also may be used ; but in general it is given much too frequently. In the slight derangements of the infant's bowels above-mentioned, particularly where the child screams much with flatulence, a few drops of Dalby's carminative is a more desirable remedy : from five to ten drops, gradually increased to twenty for a child above one year old, may be given in a dose of castor oil, and repeated in two hours—in very obstinate cases of colic, even as far as three doses. But this medicine very often becomes an exceedingly mischievous agent in the nursery. The momentary relief it affords induces the attendants to fly to it whenever the child screams, and at last the infant, though not perhaps absolutely poisoned by it, has its digestive powers and nervous system seriously injured. Dalby's mixture in the hand of a medical man, a skilful nurse, or an intelligent parent, may be a most valuable remedy, but it should never be trusted to the ordinary nursery servants.

Dalby for griping.

Mischief of frequent use.

The chief cause of almost all diseases in young children is error in diet, committed chiefly by attempting to deviate from the food pointed out by nature for the infant's support. More infants die from improper feeding than from any other cause.

Errors of diet.

But sickness may also be produced by the improper administration of the natural food, or by its quality being unfit for the nourishment of the child.

Mother's
milk alone
to be given
if possible.

Until the mother's milk is sufficient, which is rarely the case till the third or fourth day, the infant must be fed upon thin arrowroot or barley water, given by a feeding bottle if possible; but as soon as there is sufficient natural nourishment, the child should depend upon that entirely, till it has begun to cut some of its teeth, *i. e.*, till it is about six months old at the earliest. If there is milk sufficient, no other food *whatever* should be given. If, however, from any cause there is a temporary deficiency, a little arrowroot, milk and water, barley water, or thin pap, may be substituted; but if it is possible to avoid it, these articles ought never to form a regular part of the child's diet. If the mother's milk should fail, a wet nurse should at once be procured. The child should not be put to the breast oftener than once in three or even four hours after the first week or ten days. A very short time accustoms the infant to these regular periods, and its own health, as well as the comfort of the nurse, is materially benefited by this systematic method of feeding.

Time of
nursing.

During the night a well-managed infant will not require to be nursed at all, say from ten o'clock till four or five in the morning. All this is a

matter of habit, easily acquired by a little firmness and good management at first. A material step in this process is never to allow the child to sleep with its nurse, but always in a separate couch.

When two teeth have come fairly through the gums, a little extra food may be allowed: arrow-root or sago, prepared barley or soojee, with milk twice daily; and at nine or ten months, provided four teeth are cut, chicken broth, with bread or pishpash, may be given once in twenty-four hours. When the teeth are all through the gums, meat may generally be allowed for dinner daily; but in very warm weather—during the hot winds, for example—meat should not be given to children oftener than once in two days. In cases of plethoric children, twice a week will suffice during that period; and this remark is applicable to children of all ages in India.

More food
be allow-
ed.

The child should not be entirely weaned till it is sixteen or seventeen months old, if it is possible to continue so long; perhaps a better rule is, not until all the teeth, except the last four grinding-teeth, are cut. It is improper to continue the nursing beyond that period. It is true that many children are weaned without bad consequences at eight or nine months' old, but they are naturally strong and healthy, and form exceptions to the general rule. Every experienced person must

Weaning.

have had frequent opportunities of witnessing the fatal effects of early weaning upon infants.

Danger of. When the child has been weaned too early, and the consequences of such mismanagement show themselves by bowel complaints, convulsions, emaciation, &c., no time should be lost in endeavouring to induce the child to take again to the breast. Should it refuse to do so, which is most probable, if it is above six months' old, **Donkey's milk.** donkey's milk must be substituted, and must form the sole diet under these circumstances. From half to a quarter of a pint three times daily is usually enough, but it may be given four times if the child is not satisfied with less. A dessert spoonful of lime-water* should be added to each pint of the milk. The lives of hundreds of children, reduced to the brink of the grave by improper food, have been preserved by adopting this system.

Change of nurses. It frequently happens that the milk of one woman disagrees with a child, when another will restore it to health; when, therefore, an infant does not thrive, though confined to breast milk for food, it is desirable to change the nurse. Frequent changing of nurses, unless from urgent necessity, must however be avoided.

* This is best procured at the druggist's, but it may be made by dissolving two ounces of lime in three pints of water; let it stand, and pour off the clear liquid.

After weaning, their diet should be always simple, consisting of meat (flesh or fowl), with thoroughly cooked vegetables or rice, and a light pudding, if they like the latter, varied by pish-pash or mild curry for dinner; bread, rice, arrowroot, soojee, or tapioca and milk, or milk and water, and bread and butter, for breakfast and supper, with an egg added to the former meal, if desired. Very little fruit or sweetmeats should be given, and the meals should be regularly taken at stated times. Cold iced water forms the best drink usually, but delicate children are sometimes much benefited by a glass of bitter ale daily. Wine is of very doubtful advantage, unless in cases of great exhaustion from actual disease.

Food after
Weaning.

Children should be dressed very lightly in the warm season, with additional covering for the cold weather. The head should always be kept uncovered in the day time, and socks should be worn at all times—cotton in hot, worsted in cold weather. Unless the child is very delicate, flannel should not be worn next the skin; but when children are liable to colds, bowel complaints, or convulsions, it is advisable to use a thin flannel banyan or shirt reaching to the knees. For children who have no longer any necessity to wear napkins, the lower portion of the dress should always be made in the shape of trowsers. These are particularly useful at night, when the

Dress.

child throws off the bed-clothes, and is apt in consequence to be chilled suddenly. The nursery should be thoroughly open and airy at all times, and a punkah is by no means objectionable at any

Fresh air, time during hot weather. Even at night there should be a free circulation of the air in the room, the venetians of one or more windows being left open, but the child's bed should be carefully kept out of a *draught*. It is much better to use a night punkah than to allow children to be cooled by the external wind blowing on them, or to be restless from heat. Of course, in the hot winds during the day-time, the glass windows must be shut in the nursery, as well as in every other part of the house, but as soon as it is possible to open them it must be done. During the hot weather and rains, in the day-time the best dress for children to wear in the house is a thin cotton shirt, drawers and stockings forming one continuous garment. This may be made of flannel, if it is desirable, and forms by far the best description of night-clothes at all times.

Form of
dress.

Should
sleep
alone.

Children from their earliest infancy, as before remarked, should be accustomed to sleep in separate beds, and never permitted to remain in bed with the nurse, unless, and that but rarely, in case of severe illness.

The practice of keeping children shut up all day between sun rise and sun set in dark closed

rooms is very objectionable. Light and air are Fresh air.
 necessary to the healthful growth of nearly all Light.
 living things, and certainly European children,
 even in India, cannot with impunity infringe this
 rule. It is not well to permit the sun to glare
 directly into the room, but I much question, ex-
 cept during the few weeks' continuance of the very
 hot winds, whether it is not much more healthful
 to keep the glass windows of the nursery always
 open, and the venetians only closed during the
 time the sun is absolutely shining on the windows.

Exercise is equally essential to the health of Exercise.
 all children. After the first week they should be
 taken out morning and evening by the nurse, and
 as soon as they can walk, they should be per-
 mitted to run about out of doors as much as they
 possibly can without exposure to the sun. It is
 much better to allow them to use their own legs,
 than to carry children about in the arms of ser-
 vants or in carriages. When they are of suf-
 ficient age they may ride on horseback with
 great advantage. This forms in all seasons an
 admirable description of exercise for children in
 India.

The utmost attention should be paid to cleanli- Cleanli-
 ness of person and dress. Every child in India, ness.
 who is not suffering from sickness, should, if
 possible, be bathed and dressed twice daily, in
 cold water generally, but in very cold weather

Bathing. the water may be made tepid. For very young infants warm water may be used ; but as soon as possible they should be bathed in water of the ordinary temperature. In cases of weakly, delicate children, it may be necessary to use tepid water at all times, and not to bathe them oftener than once in twenty-four hours ; but these are rare exceptions. In some cases of constitutional debility, the common black salt in the proportion of a seer to four gallons of water, forms a useful and strengthening addition to the bath where ordinary sea water cannot be procured, but the latter, if it can be obtained, is far preferable.

Salt
water.

Vaccina-
tion.

Every child should be vaccinated within three or four months of its birth, if possible, but the period must depend somewhat upon the season of the year. Vaccination is rarely effective in the hot weather and rains. It is best performed between the months of November and March. It is safe to operate upon infants after they are a month old, and even earlier under urgent circumstances.

Teething.

The most important as well as the most dangerous period of infantile life in India as in Europe—after the first week—is that of teething. The two first teeth usually begin to appear about the sixth month, and the whole set continue to be cut at intervals of from six weeks to two months, generally in pairs, till the third year. In regular teething the two centre upper teeth are

the first to come through the gums, followed by the lower corresponding pair, then the next upper and lower front pair, the upper and lower grinders, and lastly of the temporary set, the eye teeth ; while from six to twelve months after the latter, the first of the permanent grinders appear. This natural succession often varies materially, as well as does the period of commencing the whole process, without producing any apparently injurious effect upon the child's health ; though as a general rule teething is a safer operation when there is but little variety from the ordinary course above described.

When children are taken ill in any way during this period, attention therefore should always be paid at once to the mouth, for if not the direct cause of the complaint, the latter is almost always much aggravated by the irritation of teething, and medicines are comparatively of little avail till this irritation is removed. If there is the slightest reason to suspect, from unusual swelling or redness of the gums in any part, that the child is cutting teeth, the gums over them should be freely lanced. This trifling operation causes little pain and cannot possibly, in the most unskilful hand be attended with danger ; it may be performed with a lancet, a penknife, or any sharp cutting instrument, care being taken to cut down if possible to the coming tooth. This lancing may be repeated

advantageously every two or three days while the child continues to suffer.

Sending
children
to Europe.

With regard to the period of sending children to Europe, it is difficult to lay down precise directions, so much depends upon their health. In cases of delicate children it may be necessary that they leave as soon as they are weaned. On the other hand we find children *apparently* thriving here, until they are ten or twelve years old ; and on the hills they may, perhaps, as far as *physical* education is concerned, be reared to maturity as safely as in Europe. As a general rule, children in ordinary health should not be detained in India after they are six years of age.*

* When children of delicate or scrofulous constitutions are compelled to remain in the Indian plains, great benefit is sometimes derived from the use of cod liver oil, given in teaspoonful doses twice or thrice, daily, in a little milk or peppermint water, or from four to five drops of the wine of iron in water may be given with an occasional aperient ; but the cod liver oil should be first tried.

TABLE OF COMMON DISEASES OF CHILDREN.

1. Simple Fever (Mild, Remittent, Typhoid, Intermittent.)
2. Complicated Fever.
3. Cough.
4. Croup.
5. Hooping Cough.
6. Diarrhœa.
7. Dysentery.
8. Protrusion of the Bowels.
9. Colic.
10. Cholera.
11. Worms.
12. Thrush.
13. Mesenteric Disease.
14. Eruptive Diseases.
15. Mother's Marks.
16. Eruptive Fevers.
17. Jaundice.
18. Dropsy.
19. Inflamed Eyes.
20. Stoppage of Urine.
21. Convulsions.
22. Accidents.
23. Ruptures.
24. Deformities at Birth.

SIMPLE FEVER.

Symptoms. The symptoms of fever are a *dry* heat of skin, especially of the forehead, hands and feet, quick pulse, flushed face, redness of eyes, white tongue, restlessness, fretfulness, thirst, high coloured and scanty urine; and if the child can speak, complaints are made of pain in the head and limbs.

With these symptoms there may be cough or costiveness, or diarrhoea, or several other *accidental* symptoms complicated, but the signs above noted, are the *essential* symptoms. The subsidence of these denote the passing away of the paroxysm, and the first observed and most marked indication of this occurrence is the appearance of a moisture on the forehead, or in the bends of the various joints of the body and limbs.

Treat-
ment.

If the attack be severe, give an emetic at once, and two hours after that has ceased operating,

give a dose of calomel and James's powder.* Put the child into a warm bath at 100° to 105° for ten minutes or a quarter of an hour; and two hours after the calomel, give a dose of castor oil, or a teaspoonful of senna mixture.† If the child's bowels are not moved two or three times within six hours after the calomel has been given, repeat the oil, and again in four hours after this,—if needed, administer also an injection of oil and hot water. In mild fevers—by far the most frequent form—instead of calomel the grey powder, (mercury with chalk) in doses of five grains may be substituted, followed by oil, and repeated once or twice—*of course, in cases of fever arising from teething, the gums must be lanced.*

If the fever does not subside in twelve hours, repeat the calomel, the oil, and the bath, and in very urgent cases, administer small doses of tartar emetic.‡ The whole may be again repeated in twelve hours more, if the fever continues unabated. The child's head, if hot, must, from the commencement, be kept cool with vinegar and

* Equal parts of each. One grain for a child under one year; two grains for ditto, under two years; three grains for ditto, under four years.

† *Vide* page 88.

‡ The simplest mode of giving this is to mix half a grain of tartar emetic in four ounces, *i. e.*, eight large table-spoonful of water, and give a tea-spoonful of the mixture every two hours.

water or ice water. If after free purging in the first twenty-four hours, the child's head appears heavy, or the light hurts its eyes, the fever still

Leeches to continuing, leeches must be applied to the temples, head.

(*vide* p. 98). If the fever continues severe for twenty-four hours, in spite of free vomiting and purging, while the head does not appear much affected; but especially if the belly is swollen and tender to the touch, and vomiting is frequent, the

To the stomach.

leeches must be applied to the pit of the stomach instead of to the head. Leeches, however, must

always be used with caution for children, and at an early period of fever; no later than the third, or at most the fourth day. They are not required in moderate degrees of the disease, or except under the circumstances above-mentioned, but many obstinate and severe cases of children's fever are greatly relieved by a single application of leeches to the pit of the stomach or head, especially to the former. When the skin becomes

perfectly soft and perspiring, the bowels have been freely opened, the child's head does not appear very heavy, and the eyes look bright,

Quinine. small doses of quinine may be given, (*vide* page 33).

Repeated doses of calomel in obstinate cases.

If in spite of leeching the head or stomach, calomel, purging, and tartar emetic, the fever continues unabated on the third day—calomel should be given in small and repeated doses every

three or four hours* with the tartar emetic mixture. Care must be taken at the same time to keep the bowels freely open.

If the child's head becomes very heavy and it grows stupid, and there is any tendency to squinting, or to convulsive movements of the muscles, a blister must be applied to the nape of the neck; Blisters. mustard plasters to the calves of the legs; the calomel must be continued, and if the child's bowels are at all obstinate, a full dose of senna mixture or compound scammony powder must be given every four hours till it operates freely. If this does not succeed, an injection composed of castor oil and turpentine, of each a tablespoonful in a pint of warm water, should be administered and repeated every two hours till it operates. The purgative must be repeated daily while these symptoms last. While the skin continues hot and dry the utmost advantage is derived from sponging the surface with water and applying wet cloths continually to it; but a still more soothing application and far more effectual in producing perspiration, is the wet sheet, employed so em-

* One grain to a child under two years old, and one and a-half under three. There is a good fever powder for this purpose made by mixing calomel four grains, tartar emetic half a grain, powdered chalk twelve grains. Divide into twelve powders; one to be taken every second or third hour.

pirically by the Hydropathists. There are few remedies equally powerful for the purpose, and at the same time more safe than this one, as I have found by considerable experience. The mode of using it is as follows. Spread upon the floor or a table, a blanket, and cover that with a sheet which has been soaked in water and subsequently wrung out. There is really no danger in the water being perfectly cold, but to avoid all apprehension, it may be as well to take the chill off it. The patient being stripped must then be placed upon the sheet, which with the blanket must be wrapped round him entirely and closely, leaving the head and face only uncovered; but a wet cloth may also be kept upon the former. He may be left for an hour or two in this state, unless copious perspiration ensues earlier, when the apparatus should be removed and some light but warm clothing substituted, care being taken not to check the action of the skin. If perspiration does not follow the first operation, it may be repeated every four or six hours while the fever lasts.

Remitting
character
of Indian
fevers.

Fever, in India especially, generally remits or becomes less severe at certain periods of the day, and returns again with violence after a short interval—the increase usually occurs about 10 A. M., and the same hour P. M. The remission takes place about five or six. These periods must be

well watched, and all active exhausting remedies must be administered when the paroxysm is on the increase, on the contrary, the utmost caution must be used in administering them when the paroxysm of fever is absent; leeches and purgatives must never be used at that time. Quinine* is then the medicine most needed, but it should not be administered till the second remission has taken place. It requires caution also even then if there be any great heat of head or tendency to delirium, or to stupor present. It must be given, under those circumstances with

Treat-
ment du-
ring re-
mission.

* Half a grain of quinine dissolved in water every two hours; or if the paroxysm of fever have been very severe, and the remissions of the fever very complete, so that there is great danger to the child's life from a return of the fever, as much as one grain, or even two, may be given at a time. A tea-spoonful of the tartar emetic solution should be given with each dose during the first two days. Half a grain of calomel and the same quantity of James's powder will answer the same object, viz., that of preventing the dangerous excitement sometimes produced by quinine. If the child be very weak, exhausted, and perspiring copiously, the tartar emetic and the calomel must be left out. If the child is exceedingly exhausted, and not less than three or four paroxysms of fever have occurred, five drops of brandy or half a tea-spoonful of wine may be given with each dose. The quinine should not be repeated more than three times in one day, unless in very urgent cases, and it must be given only during the remission of the fever. If the quinine purge the child violently, one-half drop, or at the most two drops of laudanum may be given with each dose, or, what is perhaps safer, six drops of tincture of kino.

the addition of tartar emetic or calomel as described below, and its action well watched.

Typhoid
fever.

Treat-
ment of.

After the fever has continued for ten or twelve days, it often assumes a typhoid type; the child is delirious, moans and tosses about, the tongue becomes dry and brown, and the lips and teeth covered with fur.* In this condition quinine one grain, and calomel half a grain or a grain, should be given every six hours—a blister applied to the calves of the legs, and if there is heaviness of head or delirium, a large one should be put upon the scalp—the bowels should be kept freely open at the same time by a morning dose of senna, scammony or oil. If the child's mouth becomes affected with the mereury, which is very rarely the case, that medicine in every shape must be discontinued forthwith. When there is great restlessness, and especially when there is delirium in this typhoid form of fever, the greatest relief is often obtained by the tartar emetic and laudanum

* Under these circumstances and at any time during the continuance of fever, when the tongue is dry and dusky furred, small doses of carbonate of soda should be given at frequent intervals, ten grains every four hours in water, or it may be given in the following form.—Carbonate of soda two drachms, sweet spirits of nitre three drachms, water twelve ounces.—Of this give half a wine glassful for common drink every two or three hours. In protracted cases of fever, and especially in typhus, when there is much exhaustion, half a wine glassful of white wine whey may be given with great advantage every three hours.

mixture (p. 92); under its use, the delirium often subsides and the child falls asleep.

In recovery from fever, it will be necessary to continue the quinine twice daily as a tonic; a grey powder should also be given now and then; and if the bowels are confined, a little oil or rhubarb and magnesia must be administered. For children above two years old, an ounce of the compound decoction of aloes, is a good moderate aperient.*

After the second day of fever, a little food must be given daily; a small quantity of sago or arrow-root, or milk and water, or barley water will suffice;—if the child is nursing, the breast will give the best nourishment.

Let the child take as much cold or even iced water, or toast and water, as it desires throughout the whole progress of the disease. It is cruel to deny this indulgence, and plenty of cold water tends considerably to promote perspiration. Indeed, as a general rule, it is rarely necessary to check the child's wish for drinking cold liquids in any disease in India. A frequent cause of infants—who

* The following powders will be found useful in convalescence from fever: carbonate of soda and powder of columbo, each five grains, rhubarb two, quinine half a grain, given every morning. These powders are exceedingly useful also in general derangement of the digestive organs, marked by loss of appetite, foul tongue and debility.

cannot speak—crying whilst ill, and indeed not unfrequently at other times, is thirst, which should always be allayed at once.

Ague.

Where the fever is decidedly intermittent, and especially where it appears in the form of ague with previous shivering fits, quinine will generally remove the disease. This medicine should be given within two or three hours of the expected return of the fever, thus if the fever be expected at ten A. M. a grain of quinine should be given at seven and nine o'clock, and so repeated daily. The dose increased if necessary.

Enlarged spleen.

When the spleen becomes enlarged in the course of fever, if the disease be recent and the part painful, one or two leeches may be applied to the swelling, and repeated every third day for a fortnight, and purgatives freely administered daily,* but this is seldom required in children. Usually the complaint is chronic, the child feeble, pale, and emaciated, and frequently accompanied by fever of an intermittent character. This form of the disease is best treated by a combination of tonics and purgatives.*

* The following formula will be found to answer this purpose : quinine, sulphate of iron, rhubarb powder, aromatic powder (a mixture of equal parts of black pepper, ginger and cinnamon, make a very good aromatic powder) of each one grain ; half the dose for a child under two years. This powder should be given three times daily.—If it purges more than twice in twenty-four hours, omit the

The swollen side should be rubbed at the same time twice daily with a small portion of the ointment of hydriodate of potass. This treatment requires to be continued for many weeks, occasionally for months, but ultimately it rarely fails in removing the complaint.

External
Remedies.

When the above treatment fails, and the spleen is large and soft, especially if there be at the same time a tendency to foul ulcers on the body, large doses of quinine are occasionally found to be beneficial; as much as four grains of quinine every four hours may be given to a child of three years old in this state. Nourishing diet, containing a large proportion of meat, with beer, and small quantities of wine, must also be given.

Quinine.

Mercury in enlarged spleen is perfect poison, and must not be given in any shape.

Danger of
Mercury.

Change of air after fevers of all kinds, and especially in these protracted cases, is of the utmost service, both in removing the disease, and in promoting speedy convalescence.

Change of
air.

rhubarb; if it still continues to produce too much action of the bowels, add one, or if necessary two grains of Dover's powder to *each* dose. Or a powder composed of carbonate of iron and bark powder, each 3 to 5 grains, with or without a similar quantity of prepared chalk, according as the bowels are loose or not, may be used instead.

COMPLICATED FEVER.

Acute Inflammation. It frequently happens in the progress of fever, that some other disease arises, usually inflammation of one of the large internal organs, the brain or the lungs especially. This occurrence in young

infants is often very difficult to detect, even by the most skilful physician. There are few direct symptoms to indicate it, but it may be suspected when the fever continues, in spite of all the usual remedies, the child is unaccountably restless and in evident pain, breathes very short, and is evidently suffering more than the mere fever could produce.

Inflammation in the brain. Sometimes the disease manifests itself clearly to be inflammation of the brain. The child screams

frequently without apparent reason, starts in sleep, draws the eye-brows together as though in pain, cannot bear the light, the pupils of the eyes are much contracted, it vomits when raised into a sitting posture, passes stools which look like chopped spinnach dissolved in water, puts its hand frequently to the head, which is very hot, subsequently squints, is convulsed, and picks at the bed clothes or at motes in the air, and gradually becomes stupid and insensible. This constituting the acute form of water in the head.

Water in the head.

At other times the chest is affected, and the symptoms above described are absent; in their place there is cough and difficulty of respiration; great uneasiness, and evident pain. This form of inflammation is often very obscure until it has reached an alarming extent.

Sometimes the complaint is in the abdomen, and is either inflammation of the bowels or knotting of the intestines. These are indicated by pain on pressure of the belly, extreme thirst, constant vomiting, swelling of the stomach, and difficulty in moving the bowels, even by the strongest of medicine.

The treatment of these diseases is nearly similar for all. *Leeches* must be applied to the head, chest, or abdomen, according to the locality affected, but great caution is required in using them, if they are employed after the fever has already continued some days; indeed, they are almost inadmissible if the child is previously much debilitated. They are best tolerated in affections of the head. For the rules of applying them see p. 98.

Next, purgatives must be freely administered, and their action continued while the symptoms are at all severe. In inflammation of the brain, more especially, the stronger purgatives, senna, scammony, and jalap are necessary. Where these remedies do not act freely, half a drop of croton oil may be mixed with a tea-spoonful of castor oil,

and repeated every four hours till it operates. Under similar circumstances, the addition of from twenty drops to a tea-spoonful of turpentine to the castor oil may be substituted for croton oil.

Calomel. Calomel must be given in repeated doses, not as a purgative merely, but to produce its peculiar action on the system, the effect of which is very powerful in controlling inflammation. Two grains of calomel, one of James's powder, and half a grain of ipecacuanha, may be given every four hours to obtain this object; the quantity being increased for a child above two years, and decreased to half for one under eight months. In some cases where the disease is very urgent, tartar emetic, in doses of one-twentieth of a grain, may be substituted for the ipecacuanha.

Blisters. After the leeches have been used, or when circumstances prevent the latter from being employed, blisters must be resorted to. In head affections they may be placed behind the ears or on the nape of the neck, or even on more distant parts, the calves of the legs or inside of the thighs; but where there is much heat of head, the latter situations are, I think, preferable to the former. They should be repeated in severe cases twice or thrice in different localities. When there is much stupor, great advantage is frequently obtained by a large blister applied over the greater part of the scalp. Cold water, and when procur-

able, ice, should also be applied to the head from the first, and continued till the symptoms abate.

Where the disease is situated in the chest, the blister should be applied to the breast-bone, and to the pit of the stomach if there is much vomiting. Nothing relieves the irritability of stomach in children so much as a small blister.

Some people have a prejudice against the early employment of blisters, which I confess I do not entertain. When properly applied (vide page 97), there is no danger to be apprehended from them, and they are remedies of the utmost value in many cases of disease.

Mustard plasters are occasionally used as substitutes for blisters, but their effect is more temporary, and they are far more painful while they are on the skin. Where a very rapid effect is desired, as in cholera or convulsions, or severe colic, mustard plasters are invaluable; but under other circumstances I prefer greatly the employment of blisters.*

Sometimes, in place of the acute form of fever above described, we find a more chronic or irregular disease. The child occasionally grows warm, languid, and inclined to lie down. This occurs,

Mustard
plasters.

Chronic
inflammation.

* Mustard plasters are made by spreading mustard, prepared as for the table, thickly upon cloth. They should be kept on the part from a quarter of an hour to half an hour.

perhaps, at some particular period of each day, or
 Symptoms the febrile symptoms come on every night, making
 the child restless, uneasy, thirsty, and the head
 especially is warmer than natural. When the fit
 is not present, the child is lively and cool, but
 weaker and more thirsty than usual ; either it has
 no appetite or is unnaturally ravenous. With
 these symptoms the bowels may be regular, or
 they may be more irritable than ordinary, the
 stools being usually loose and of a light colour.
 The stomach, too, is often very irritable.

If not relieved, the child either pines away or
 gradually becomes stupid, convulsed, and dies.

Causes. These symptoms may depend on the irritation
 of teething, upon worms, or they may indicate a
 disposition to water in the head. The treatment
 for each form is, however, nearly similar.

If any teeth are due, they are probably the
 cause, and the gums must be freely and frequently
 lanced. The bowels must be kept freely open by
 Treatment frequent morning doses of oil or Gregory's powder,
 or senna ; and small alterative doses of mercury,
 in combination with antimony, must be given
 daily. With this view calomel half a grain,
 James's powder and prepared chalk, each one
 grain ; or grey powder three grains, James's
 powder and rhubarb, each one grain, must be
 given every night ; or in more urgent cases, where
 there is considerable fever and much heat of head,

twice daily. When less severe, and when the disease is evidently declining, these powders may be given every second or every third night. When the fever is severe, the child robust, and more than one year old, a leech may be applied every second day behind one of the ears. Whether this be done or not, either a small blister should be kept open behind one of the ears or on the arm ; or a crop of pimples should be established and kept in action in one of these situations, by means of tartar emetic ointment, *vide* page 45.

ERUPTIVE FEVERS.

Among the ERUPTIVE FEVERS, *Scarlet fever*, *Measles* and *Chicken-pock*, are generally very mild in India, and rarely attended by the dangerous symptoms which are seen in cold climates. In most cases it is requisite only to give a moderate purgative (castor oil or senna) every morning for two or three days, and to keep the child quiet and cool with low diet and plenty of toast and water to drink ; at the same time, avoiding the risk of catching cold. Occasionally, but rarely, there may be a little congestion in the head or lungs, requiring the use of leeches to the temples or chest, calomel, purgatives and blisters (*vide* fever, page

Eruptive
fever,
Measles
and Scar-
let fever.

30); or the fever may assume a typhoid character, presenting the symptoms and requiring the treatment described at page 34.

Small Pox *Small Pox*, however, is a very serious malady in this country, and very fatal, particularly to native children. In the first few days, the treatment must be the same as that recommended for scarlet fever and measles. When matter forms in the pustules* and the child suffers much distress, a mixture of tartar emetic and laudanum (*vide* page 60) should be administered, the bowels being kept regularly open. If symptoms of affection of the brain are present, shewn by great drowsiness or violent delirium, this mixture is inadmissible, and instead, calomel purgatives, blisters and leeches, and the continued use of calomel, are requisite. The latter remedies, too, become necessary, if inflammation of the lungs arise in the progress of the disease. These are indicated by fever, severe cough and difficulty of breathing. A more frequent source of danger, however, in Sinking. this disease, is sinking and exhaustion, requiring the use of ammonia one grain, camphor half a grain, quinine a quarter of a grain, every three

Severe
Symptoms

* It is well to cover the pustules on the face and neck with mercurial ointment, renewed every day, as this certainly diminishes the chance of subsequent pitting. Covering the pustules with gold leaf is said to have an equally good effect.

hours. Nourishing broth, and even occasionally wine, will then be also needed. The white wine whey recommended at page 34, is very useful in these cases.

COUGH.

Cough may arise from a simple cold, and may be unattended with a fever, or the latter may be a very slight symptom. Under these circumstances, and especially when accompanied by free running at the nose, it is seldom of a dangerous character, and requires little medicine. But when there is much fever, no running at the nose, or from the eyes, great restlessness, and quick difficult breathing, it requires close attention and active treatment.

In all cases give an emetic at once, and repeat daily if there is much accumulation of phlegm on the chest, or there is difficulty of breathing. The ipecacuanha wine, with ipecacuanha powder,* is the best, and is always perfectly safe, even when frequently repeated. After the emetic, in mild cases give a grey powder, with two grains of James's powder; or, if the cough be severe, a dose of calomel and James's powder (*vide* fever.)

* *Vide* page 91.

The severe
cases.

Follow this in four hours by oil, or rhubarb and magnesia, (or senna mixture in severe cases of children over two years.) If there be much fever present, the tartar emetic mixture must be given (*vide* fever,) and the emetic, the calomel, and the purgative repeated every twenty-four hours for the first three days.

If there is much oppression of the chest, with fever, continuing in spite of the emetic and purgative, on the second day leeches must be applied to the chest; two, three, or four, according to the age of the child (*vide* fever,) and repeated daily for two or even three days, perhaps twice in twenty-four hours, if the case be urgent. One grain of calomel and one of ipecacuanha must also be given every five hours under these circumstances. A blister should be applied to the chest. If there is much fever with the cough, and it is severe and hard from the beginning, it is well to commence with the application of leeches.

The mild
cases.

If no fever is present, or it has been subdued by the requisite treatment, and the disease presents the signs of ordinary cough only, after the emetic and purgative, all that is requisite is a tea-spoonful of the ipecacuanha mixture three or four times daily, or a tea-spoonful of one of the cough mixtures (*vide* page 96,) and occasionally a little aperient medicine, Gregory or castor oil; attention being paid to the child's diet.

If this ordinary cough is unusually troublesome at night, from half a tea-spoonful to a tea-spoonful of paregoric (according to the age of the child) may be added to the dose of the cough mixture on going to bed. Flannel should be worn next the skin where there is little or no fever present, and especially where there is running at the nose, showing it to be a mere cold. Paregoric at night.

If the cough continues obstinate, a small blister must be applied to the chest, or tartar emetic ointment* may be rubbed on the part to produce pustules. Obstinate cases of simple cough. If the cough continues, attended by a great deal of phlegm, nothing will afford so much relief as a powder of calomel, half a grain; ipecacuanha and nitre, each one grain three times daily, the blisters being continued. Change of air is, after all, the most powerful remedy for protracted cough in children.

* Tartar emetic one drachm, spermaceti ointment or hog's lard, one ounce. Mix well; rub a piece as large as the end of the fingers, night and morning, on the skin.

CROUP.

Symptoms. Croup is readily known by the harsh crowing sound of the inspiration ; the dry metallic cough ; the quick difficult breathing, rapid pulse, and hot skin ; generally coming on very suddenly, and advancing with swift strides. In some cases terminating fatally in a few hours, in others passing off almost as quickly and suddenly as it appeared. The latter variety is less dangerous and more easily removed, is rarely accompanied by fever, and is by far the most common form, but it is more apt to return.

Treatment. Administer an emetic at once,* and put the child into a hot bath. Leeches must next be applied to the lower part of the neck, two, four, or six, as may be needed, for the age of the child. A blister should, at the same time, be placed on the upper part of the throat. The liquid blister is the best. It should be large, extending all

* In croup, for children above one year old, I believe that antimonial wine or the following substitute is best : Tartar emetic two grains, water one ounce ; a tea-spoonful every ten minutes till very free vomiting ensues. But for younger children, ipecacuanha wine, prepared as directed, page 91, should be preferred, and one grain of tartar emetic added to the mixture ; the dose a tea-spoonful every quarter of an hour.

round the front of the throat. When the action of the emetic has subsided, give calomel three grains, scammony powder or jalap four to ten grains, according to age. Immediately after the first dose of calomel, give a tea-spoonful of the emetic mixture previously administered, and continue throughout every second hour, together with either one or two grains of calomel. If the bowels are not freely open in four hours, ten or twenty grains of compound scammony powder must be given, or senna mixture, and repeated every three hours till it operates, *for the bowels must be freely purged*. The leeches must always be repeated if the child is not materially relieved in six hours. As the symptoms improve, the calomel and emetic mixture may be *gradually* discontinued, but small doses of these medicines should be given once if not twice daily, for three or four days.

Where the child suffers from the *mild* variety of this disease, occurring frequently—it will be sufficient on each occasion to give an emetic, followed by a purgative, with the tartar emetic mixture, and perhaps a blister.

Children subject to croup require great attention to their diet, and care against catching cold or ordinary cough, which in these patients frequently ends in an attack of croup.

Croup, especially the mild form, may arise from

Mild variety.

Often arises from common cough.

From teething.

teething; and where there is the least reason to suspect this cause, the gums must be freely lanced.

HOOPING COUGH.

Symptoms. Is distinguished from common cough by the particular hoop in inspiration during the fit of coughing, by the great violence of the paroxysm, and its long continuance.

Treatment. When fever is present at the commencement, leeches may be necessary, and these may require to be repeated once or twice, but in ordinary cases they are not needed. Frequent emetics and free purgation are always requisite in the early stage of the complaint, and even throughout an occasional emetic, and great attention to keep the bowels open, are necessary. Blisters and tartar emetic ointment to the chest, or irritating lotions to the spine, are very useful.* These may be made by mixing turpentine and brandy equal parts, or hartshorn and oil, in the same proportion and rubbing them well down the middle of the spine or over the chest, night and morning, so as to produce redness of the part and a little

* The popular remedy called Roche's embrocation may be employed for this purpose.

smarting. The cough mixtures before recommended may be used with advantage, or a mixture of ipecacuanha, half a grain, three grains of carbonate of potash, and a similar quantity of alum given in honey three or four times daily. Change of air frequently produces the most miraculous advantage in the cure of whooping cough; a very short distance, two or three miles, being sometimes sufficient to cure a case of several months' duration.

DIARRHŒA

Or common purging, if moderate in quantity, and especially if the motions are at all consistent, must not be suddenly checked in children. It often depends on some irritating matter in the intestines which must be first removed, and it is frequently the result of teething, being a salutary effort of nature to throw off the irritation of the system thus produced. It is best therefore in most cases to begin with a laxative. For this purpose give *grey powder* four grains, rhubarb two grains, ipecacuanha half a grain, and next morning a dose of oil or Gregory's powder. If the purging continues after the action of this medicine, repeat half the powder in the evening, with one grain of Dover's

Not to be
too sud-
denly
checked.

Laxatives.

Chalk
mixture.

powder. If, however, the diarrhœa continues to be severe, and the child is much weakened by it, the chalk mixture* should be given, or Dover's powder † with two grains of prepared chalk powder, and repeated every three hours till the purging stops. If this is ineffectual, give calomel half a grain, Dover's powder one grain, prepared chalk two grains after each loose motion; and if the evacuations are very frequent and watery, and cannot otherwise be checked, inject the following solution: alum half a drachm, water two ounces, laudanum six drops; repeating if required.

Injection.

Chalk
mixture at
the first in
some cases.

If, however, from the commencement the motions are watery and frequent, and especially if cholera be prevalent at the time, it will be better to begin at once with chalk mixture, and the next day give a dose of oil or Gregory, repeating subsequently the chalk mixture, or the Dover's powder and chalk. In very obstinate cases I have known one grain of calomel and one of prepared

* Chalk mixture is made by mixing prepared chalk half an ounce, sugar three drachms, gum arabic powder half an ounce, water a pint. Of the above mixture *take* four ounces, and add prepared chalk powder two drachms, tincture of kino four drachms—give a tea-spoonful after every second motion, and, if this be not sufficient, half a drop to two drops of laudanum, according to the child's age, may be added to each dose.

† One grain for a child under one year; two ditto ditto three years; three ditto ditto five years.

chalk, given every hour, to save the child's life, when everything else appeared to fail.

DYSENTERY

Differs from diarrhœa by the passing of blood Symptoms and mucus, and by pain in the belly and straining during the evacuation. There is often fever present.

In mild cases it requires nearly the same treat- Treatment ment as diarrhœa, but when the stomach is very tender, or there is much fever, griping or straining, and the disease is *recent*, leeches must be Leeches. applied to the abdomen, and if the case be severe, repeated daily for two or three days together, two, three, or four leeches at a time, according to the child's age (*vide* fever). A small dose of oil must Purgatives. be given daily for the first three days, and grey powder with chalk and rhubarb each two grains, and ipecacuanha half a grain, every six hours. After the third day, if the disease continues, Dover's powder with chalk and ipecacuanha must be given, without the grey powder and rhubarb, during the day, and the grey power only at bed time.

If the disease continues unchecked for some days, and the child is old enough to swallow a

Sugar of
Lead.

pill, *i. e.* above three years of age, the following may be given : sugar of lead one grain, opium one quarter of a grain every four hours, the Dover's powder and grey powder being omitted. These sugar of lead pills will be found very useful also in obstinate diarrhœa. For obstinate cases sulphate of copper may be substituted for acetate of lead, in doses of a quarter of a grain to a grain, mixed with a quarter of a grain of opium. When the child is too small to take pills, it may have from one to two grains of sugar of lead, dissolved in a tea-spoonful of water with two, three, or four drops of laudanum, according to its age, every four hours or oftener if the purging continues. I have given as many as ten drops to a child two years' old, three times daily, but this was an extreme case. If the child is very restless and purged at night, inject laudanum twenty drops, cold water one desert spoonful ; repeat this, if necessary, in four hours. If only three years' old use but ten drops, if under one year, four ; this may be done from the commencement of the disease.* Great relief is obtained during the progress of dysentery by the occasional injection of cold

Injectiōns
at night.

* If the injection is not sufficient, it is well to give two or three grains of Dover's powder (according to the child's age) *every night*, and if this does not procure rest, give two drops of laudanum in a little water, and repeat it, if required, in four hours.

water; a wine glassful three or four times daily will answer the purpose. Where every thing else fails, a very large dose of calomel, from four to Calomel. seven grains at bed time, followed by oil in the morning, will sometimes relieve the irritability of the bowels. This remedy should not, however, be resorted to unless under urgent circumstances; for in place of affording relief the calomel not unfrequently increases the irritation.

The following powder is sometimes very efficient in chronic diarrhoea, or in chronic dysentery:—prepared chalk and Dover's powder, each two grains; burnt rhubarb one grain, ippecacuanha half grain, given every four or five hours without any other medicine.

In cases of bowel complaints, whatever other medicine may be employed, laxative medicines *Laxatives.* require to be given *occasionally* during their continuance; Gregory's powder and soda in equal parts answers this purpose extremely well. It happens not unfrequently that stringent medicines prove utterly ineffectual in restraining bowel complaints, until the free action of a purgative has been twice or thrice repeated* during their continuance.

* The lower aperture of the bowels often becomes exceedingly sore and painful from the frequent passing of stools; under these circumstances, this part should be well oiled after each motion, or anointed with sugar of lead ointment.

Bale fruit In protracted cases of dysentery the greatest benefit is to be derived from the *Bale fruit*, when all other remedies fail. The fibrous or stringy part of the fruit should be removed, and a little water added to mix up the pulp into thick syrup. This should be sweetened with sugar, and a wine-glass full given to the child two or three times daily for some time.

Great attention to Diet.

Medicine, however, is useless in bowel complaints of children, unless the strictest attention is paid to their diet. In many instances, the disease is caused by improper food, and as often kept up by it, though originally produced by other causes. During the continuance of either of these complaints, the child if suckling, should be confined to the nurse's milk, or if that food cannot be given, donkey's milk with lime water should be substituted for it. If neither of these are available, thin arrowroot or sago with very little goat's or cow's milk must be given. The lives of hundreds of children suffering from bowel complaints have been saved by taking away all other food, and giving them the breast of a healthy woman, or a wine glass of donkey's milk every two or three hours. Sometimes merely changing the nurse will suffice to remove these affections.*

* For children who are weaned, arrowroot and sago, with very little milk, form the best food in these diseases.

As teething also is a very frequent cause of purging in children, the gums should in such cases be freely lanced every third day over all the suspected teeth. Flannel drawers should always be worn when children are liable to bowel complaints.

Change of air, especially a voyage to sea, is most valuable in diarrhoea and dysentery ; whilst in many cases nothing but sending the child to a cold climate will suffice to cure it.

PROTRUSION OF THE BOWEL.

In long-continued bowel complaints, and indeed sometimes without such disease in delicate children, the lower part of the intestine protrudes at each evacuation, and is very painful to the child. It should always be returned as quickly as possible, and the part should be well washed with a strong solution of alum instead of plain water ; washing with iced water, too, is very beneficial for this complaint. At the same time, the child who is liable to this disease, ought never to be permitted to sit upon a chair when passing its motions. If possible, it should at those times be kept in a horizontal posture, and the evacuation permitted to fall into a cloth. The child, should, moreover,

Mechanical treatment.

never be allowed to pass a costive motion, a sufficiency of castor oil or some other mild aperient should be given daily to induce a soft evacuation. Frequent purging is equally to be avoided. This protrusion of the bowel may often be prevented by the following very simple manœuvre. When the child is about to evacuate, let the nurse with her fingers draw the skin of the buttocks outwards, so as to render it quite tight over the fundament, and hold it in this position till the motion is finished. When there is unusual difficulty in returning the protruded bowel, it must be washed well with cold alum water or a piece of *ice*, and then gradually pushed up with the fingers well oiled. In many cases the disease depends so much upon constitutional weakness, that nothing but general tonics and change of air, or in severe cases a residence in a cold climate, will relieve it.

COLIC.

Symptoms. When an infant screams and draws its legs up and is free from fever, the hands and feet being cold rather than otherwise, it is probably griped or affected with colic.

In the first place give a tea-spoonful of dill water or aniseed water, mixed with two or three drops

of hartshorn or sal volatile ; if this does not afford ease, the child will be best relieved by a hot bath, and a dose of castor oil with half a drop, or at most two drops of laudanum in it, repeated thrice within three hours if the screaming continues.

When the pain is very severe, and the child is over Treatment.

twelve months, as much as four drops may occasionally be given, but as very small doses of opium are often poisonous to children, great caution is necessary in giving that drug in any form. The stomach at the same time should be well rubbed with a liniment, composed of any common oil a teaspoonful, laudanum thirty drops ; but the bowels must under all circumstances, be freely opened, as colic is generally dependent on some irritating matter present in them ; castor oil will generally suffice for this purpose. When the attacks of colic are frequent, a dose of grey powder should be given at night, followed by oil in the morning, and if this do not suffice, a grain of calomel must be substituted for the grey powder. When there is fever present with the symptoms above described, and the belly is tender to the touch, inflammation generally exists, but this is very rare in India. Leeches must then be applied, and the child's stomach well fomented ; the laudanum and oil may still be given. But should the symptoms continue, it will be necessary to leech again and again, and give calomel one grain, Dover's

Colic with
Fever.

powder half a grain every two hours. For a child over two years in this state, a grain of Dover's powder may be given with the calomel.

Dalby.

Dalby's Carminative is a very excellent medicine when carefully administered in the colic, and griping pains of children, and is decidedly preferable to plain laudanum. When the pain is severe, from six to twelve, or even twenty drops, according to the child's age, may be given to a young child in dill water or plain water, and repeated in two hours; castor oil, or rhubarb and magnesia, being given afterwards to open the bowels.*

The following substitute will sometimes answer the purpose more effectually: Gum powder and sugar, each *one drachm*; aniseed oil, four drops; magnesia, twenty grains; laudanum, two drops; water, one ounce. A tea-spoonful for a dose.

When there is occasional griping, with irritation of bowels and frequent small stools in young infants, this mixture is very useful; it should be given three times daily till relief is obtained.

Improper
food.

These derangements of the bowels in young children, in almost every case, proceed from indigestion, produced by improper food. Hence,

* The dose of laudanum must be, of course, increased in proportion to the age of the child. As far as ten drops may be given to a child of four years.

when they occur frequently, some alteration is necessary either in the food of the nurse, in the nurse herself, or in the child's food.

CHOLERA

Is distinguished by vomiting and purging of Symptoms
white matter, coldness of the extremities, and
cramps of the muscles, principally those of the
feet and legs, feeble pulse, paleness of the face,
absence of all urinary secretion, great restlessness
and thirst.

It is generally but not always fatal to children.
The best means of checking it consist in putting
the child into a hot bath, and giving the following Treatment
mixture: Laudanum, four drops; calomel, two to
three grains; brandy, a tea-spoonful with a little
water every hour, and in urgent cases every half-
hour.* A mustard plaster should be applied to
the pit of the stomach, and another to each of the
legs; these must be repeated every two hours.
An injection of alum, half a drachm, water one
ounce, must be thrown up after each motion.
Some people trust to calomel alone, but I believe
this will not be found sufficient in the cholera of
children.

* Or the following mixture may be used:—Sal volatile,
two drachms; sulphuric ether, two drachms; camphor
mixture, eight ounces—a teaspoonful every half hour.

When the vomiting and purging are restrained, small quantities of arrowroot should be given every two hours, with a few drops of hartshorn or earbonate of ammonia—or if that be not at hand, brandy or sherry. At the expiration of twenty-four hours an active purgative should be given—castor oil or jalap, with calomel; and if there be much heat of head or stupor, leeches must be applied to the temples and blisters to the legs.

WORMS

Are generally indicated by the child looking
 Symptoms pasty and sallow, losing flesh while the stomach
 often at the same time increases in size, picking
 the nose, capricious appetite, restlessness, starting
 in sleep, grinding the teeth, and occasionally
 irregular fever.* Under these circumstances, a
 Treatment, dose of calomel and James's powder (one or two
 grains of each), should be given at night, and
 senna mixture or jalap or scammony powder in
 the morning; and this should be repeated every

* Worms are usually of two kinds—the round one, like an earth worm, and the flat tape worm, often many yards in length, but generally coming away in pieces. There is a third variety of very small ones occurring in large numbers, but they are rare in India. The symptoms produced by all are similar.

third day, as far as three or even four doses. If worms appear in the motions, it will be necessary to continue these medicines still longer, but at more distant intervals, till an improvement takes place.* Instead of the jalap or scammony, castor oil and turpentine may be substituted, two parts of the first with one of the second. In tape-^{Tape-worms.}worms the decoction of the bark of the pomegranate root is an admirable remedy, a table-spoonful in a wine glassful of milk every morning, repeated at mid-day if no stools have been produced. If, on the contrary, more than two motions are the result, only a dessert or a tea-spoonful should be given for each dose.†

THRUSH.

The white spots seen on the inside of the mouth of infants sometimes arise from want of cleanliness, but more frequently from acidity of stomach, the result in most cases of improper food; or they

* To children having a constitutional tendency to worms, the carbonate of iron (page 95) is often administered with great benefit.

† The decoction of pomegranate root is made by boiling two ounces of the bark of the pomegranate root in eight ounces of water.

The powder of kamilla in 15 grain or scruple doses repeated for two or three days has recently been found very successful also in this complaint.

are produced by mechanical irritation, as for example rough attempts at feeding with spoons, bottles, and the like. Under these circumstances the disease usually yields to the local application of borax or alum, three times a day, and the internal administration of some mild laxative, castor oil or Gregory's powder. Small doses of an antacid, as magnesia or soda, five grains each, should also be given three times daily; care at the same time being taken to remove the cause of irritation, if any be present, such as described above. Sometimes, however, the thrush is attended by severe diarrhœa or dysentery, and requires, in addition to the treatment before mentioned, the employment of the ordinary means for relieving these complaints.* The mixture recommended at page 58, as a substitute for Dalby, will be found of great service in this form of disease.

MESENTERIC DISEASE.

This is characterised by many of the symptoms of worms above mentioned, viz., enlargement of the belly, capricious appetite, emaciation of the limbs, picking of the nose, grinding of the teeth, and slow, irregular fever; but no worms escape

* The most alarming case of thrush I ever saw was one accompanied by violent diarrhœa, and caused by feeding an infant of three weeks' old from a bottle which hurt its mouth: it was cured by getting a wet nurse.

from the bowels on administering the usual remedies for that disease.

When the medicines ordinarily given for worms have had a fair trial without any benefit (and those ought always to be used in the first place), the diet should be confined to farinaceous food and oily substances, with light preparations of meat, such as jelly and broth, and the clothing must be warm. For medicine, a tea-spoonful of cod-liver oil should be given twice daily for some months, and the belly should be well rubbed, night and morning, with camphorated oil or soap liniment. An aperient should also, from time to time be administered. Change of climate is often found of the utmost service in this disease ; but it is always a very obstinate, and often a fatal malady.*

ERUPTIVE DISEASES.

Eruptive diseases of various kinds and degrees, and in different parts of the body, are exceedingly common, especially in infants and young children. They are never dangerous, and rarely need much medical treatment ; they must never be checked suddenly, especially when children are teething. It is generally better to abstain from external

Not to be
checked
suddenly.

* For the introduction of this paragraph, and one or two other useful additions to the present edition, I am indebted to the suggestion of my talented young friend and former pupil, Dr. Chuckerbutty.

applications altogether, except perhaps a little hair-powder or cold cream, or at most, oxide of zinc (flowers of zinc) powder or soda ointment or soda wash which can be prepared respectively by mixing one *drachm of soda* with an ounce of butter lard or spermaceti, or with four ounces of water. Purgatives and alteratives are the best remedies for the cure of these affections. They often depend on acidity of the stomach, and are much benefited by small doses of soda or magnesia. The following formula may be used:—soda, magnesia, and rhubarb, of each five grains every morning. If the disease continues obstinate, grey powder three grains, ipecacuanha half a grain, may be given every third night. Sulphur, magnesia, and cream of tartar, each three to five grains every morning, is also a very useful remedy for these complaints. When there is much debility present, a small quantity from a grain to half a grain of quinine may be added to this powder with advantage. When the skin is very sore, a liniment composed of olive oil and lime water, in equal parts, will afford great relief; it may be put on with a feather. The ointment of sugar of lead is also a very cooling and pleasant application to sores of this description.

Running
from the
ears.

These observations are applicable to running from the ears and sores behind those organs so frequently observed during teething. These and

many other eruptions in children, frequently serve as a relief to the system, more especially at the period of dentition; and, when they are imprudently or suddenly checked, diseases of some important internal organ frequently manifest themselves. Should the latter, under these circumstances occur (in addition to the ordinary treatment for the cure of such diseases), an attempt should be made to supply the original and comparatively harmless affection, by the application of blisters or tartar emetic ointment behind the ears, or on the upper arm or chest.

Bad consequences of curing these complaints suddenly.

Boils and Abscesses may be poulticed till they break, with bread and water, or they may be covered with an ointment of equal parts of Bees' wax, Linseed oil and Turpentine. If they do not readily come to a head they should be opened with a lancet. When there is a great tendency to boils, which is often the case in the hot weather, the constitutional treatment prescribed in the last page for cutaneous eruptions, should be resorted to.

Boils and abscesses.

The *Itch* forms an exception to the general rule of not curing eruptions by local applications. It is best treated by applying on the spots an ointment of equal parts of sulphur and oil, night and morning, giving at the same time a mustard-spoonful of sulphur every morning in water or milk.

Ringworm is another of these diseases, which must be cured by external means. Stimulating

Ringworm.

applications are requisite for this purpose. The Tincture of Iodine may be rubbed into the spots every night ; or the following lotion may be used, spirit of wine, oil of turpentine, each of two ounces, oxymuriate of mercury, six grains. An excellent remedy for this eruption may be made of equal parts of sulphur and a bazar oil called *Gurjun* oil. The unripe fruit of the papau tree cut in slices and rubbed on the spots, is also a very simple and efficient remedy for this disease. The *dard murdun* of the natives may be used for the same purpose.

MOTHER'S MARKS.

Mother's
marks.

The spots called mother's marks, when situated upon parts of the body which will not be seen in after life, require no treatment unless they manifest a disposition to increase very rapidly. If, however, they are so placed, that they would become a source of painful disfigurement when the child is grown up, on the face or neck for example, or they increase very quickly in any part of the body, they should be removed. The best mode of accomplishing this, is by the application of strong nitric acid, when it is possible. Extirpation by the knife or ligature, is preferred by some surgeons. But these measures can only be practised by a competent medical man.

JAUNDICE.

Infants, shortly after birth, frequently become perfectly yellow. This is especially seen in the whites of the eyes. It depends upon an obstruction of the bile ducts by mucus, collected in the upper part of the intestines, and is easily removed by a few doses of grey powder (three grains each) given at night, with oil in the morning. If the grey powder does not suffice to relieve the complaint, half a grain of calomel, with one grain of prepared chalk, must be substituted for it.

The Jaundice of older children generally arises from disordered function of the liver, and is frequently accompanied at first by some pain and fulness in the organ, and slight fever. If the latter symptoms are present, leeches should be applied under the ribs of the right side once, and in severe cases twice, or even thrice. An emetic should be administered, followed by a dose of calomel and James's powder at night, and a purgative in the morning, given for three or four successive days till the fever subsides. Subsequently a blister should be applied over the leech bites, and small doses of grey powder, rhubarb, and soda, two grains of each of the former to five of the latter, given every night—with an occasional aperient.

In milder (which are the most frequent) cases the leeches should be omitted, and the calomel and James's powder given only once or twice at most ; but the emetic must be administered, and the grey powder, rhubarb, &c., continued for some time. If the case is obstinate, change of air and probably a sea voyage will be necessary.

DROPSY

Is a complaint which consists in a collection of fluid under the skin or in one or more of the cavities of the body. It is general when the whole body is swollen with water, partial when confined to an arm, or a leg or some other isolated part. Thus we may have water on the brain, in the chest, abdomen, &c. depending on a variety of causes. In children in India dropsy most frequently results from chronic enlargement of the spleen or liver, or from long continued diarrhoea or dysentery ; or from two or more of them combined.

As in most cases of this complaint the children are excessively feeble, they are not in a condition for active treatment. When the disease is connected with the liver or spleen and there is no looseness of the bowels, frequent purgatives are

all that is necessary to add to the tonics already recommended in affections of these organs. When however there is much diarrhoea, astringents and tonics must be alone employed in preference to purgatives, which in such cases would be injurious. Bark, carbonate of iron, prepared chalk, each two grains, and ipecacuanha one grain or half a grain, make a very good combination for this purpose.

Besides this, the swollen parts may be rubbed with camphorated oil to promote absorption and to excite a healthy action in the skin. Treatment.

INFLAMED EYES.

It sometimes happens that the eyes of *new-born* infants are inflamed, and discharge matter in considerable quantity. If this do not yield in two days to washing with warm water, but on the contrary, the child cannot open its eyes, and when opened by force, the inside of the lids is seen to be red and inflamed, and filled with matter, more active measures must be taken, or the child will lose its sight. The most efficient means for relieving this disease are the following: Dissolve six grains of lunar caustic (nitrate of silver) in

one ounce of water. Drop into the eye two drops of the mixture every morning, taking care that the lotion fairly enters between the lids. The fluid may be dropped from a camel hair brush, or from the end of a quill cut like a scoop.* If the eyes are not improved materially by this operation in four days, the strength of the solution must be increased by the addition of three more grains of the caustic; and after four days' application of this stronger solution without improvement, three more grains, making twelve in all, should be added. Moreover, if the eyes continue without change, a small blister, an inch long by half an inch broad, should be applied behind each ear. During the continuance of the disease great attention must be paid to keep the bowels open; and it is desirable to give every other night three grains of grey powder with half a grain of ipeacuanha powder.

The disease in older children is rarely so serious, and if recent is generally removed by keeping the patient for a day or two away from any bright light, covering the eye or eyes (if both are affected) with a piece of lint dipped in cold water,

✓ * Some prefer using a solution of alum, in the proportion of twelve grains to the ounce of water, or of sulphate of zinc six grains to the ounce; but from considerable experience, I much prefer the nitrate of silver to any other application.

administering a good purgative dose once or twice, and putting the child on low diet. If the inflammation, however, is very severe, it may be necessary to apply leeches to the temples once or even twice, to use the purgatives more actively, and after three or four days to substitute for the cold water above described, a lotion composed either of alum or sulphate of zinc, in the proportion of six grains to the ounce of water. After a week or ten days, a few drops of the lotion should be dropped into the eye every morning, instead of being applied constantly to the eye.

STOPPAGE OF URINE.

It frequently occurs that children, especially infants, have some difficulty in making water, and sometimes the discharge stops altogether. In such cases warm fomentations should be applied to the lower part of the stomach, and small doses of sweet spirit of nitre should be given every two hours till it operates. The dose of this medicine varies from five to twenty drops, according to the child's age. It must be given in water. The stoppage may arise from mucus filling up the

passage ; by no means an unfrequent occurrence in newly-born children, especially in boys. This obstruction, in most cases, is easily removed by passing a probe into the passage for a short distance. If, however, this is not sufficient, a proper instrument must be introduced by a surgeon.

CONVULSIONS

Causes. Are always dangerous. They usually proceed either from teething or deranged bowels ; they may arise spontaneously, or they may occur in the progress of other diseases. They require the most prompt treatment for their relief.

Treatment Put the child into a hot bath as soon as possible, and give it at once from two to three grains of calomel, followed in an hour by a purgative ; either oil or senna mixture, or scammony. Repeat this till it acts freely. Turpentine with castor oil (*vide* page 89), is an exceeding good purgative in these cases. When the child comes out of the bath, put a mustard plaster all down the spine and upon the soles of the feet. If the convulsions return, put leeches* to the head,

* In pale, delicate children, however, the employment of leeches, even in convulsions, is of very questionable pro-

regulating the number according to the age.* While the child is in the bath, pour cold water or put ice upon its head: this latter operation may be continued after the child comes out of the bath, if the convulsions do not cease. If there is the least reason to suspect teething to be the cause, the gums should be freely lanced, as soon as the mouth can be opened. If the convulsions continue, calomel must be repeated every two hours, and a free action in the bowels kept up by scammony or turpentine, and castor oil given every four hours. Blisters should be applied to the spine, about an inch and a half broad, and six to eight inches long.

It is desirable to keep up a free action on the bowels for some days after an attack of this disease, and for that purpose one or two grains of calomel at night, followed by a dose of senna or of scammony in the morning, should be repeated twice or thrice. A small blister should also be applied to the calf of one of the legs, the upper

After
treatment.

priety; and the same caution should be observed in convulsions occurring where the child has been much reduced by previous disease or active treatment.

* If the bowels have been freely purged, and the convulsions continue obstinate, an injection of from ten to twenty drops of laudanum, in an ounce of water, will sometimes be found to relieve the symptoms: this may be repeated in four hours.

arm or behind the ear, and kept open for some weeks by the cantharides ointment; or tartar emetic ointment should be rubbed into the above-mentioned spots, and its action kept up by repeated applications. This latter is, perhaps, the better method for young children, and should never be neglected, while there is the least tendency to convulsions. Great attention should also be paid to the diet of children liable to this disease.* A very marked indication of the tendency to convulsions, is the turning in of the thumbs towards the palms of the hands. Whenever this is observed, the child should be closely watched, and great attention paid to the teeth, the diet, and the bowels.

* One of the most common causes of convulsions in infants is improper food. The disease is frequently removed at once by changing the nurse, or omitting all food but human milk or asses' milk.

ACCIDENTS.

In *severe bruises*, the best remedies are rest and Bruises.
fomentation with hot water, in the first instance,
and subsequently gentle rubbing twice or thrice
daily with soap liniment, or with a mixture of
brandy and any common oil in equal parts.

In *simple cuts* a piece of sticking plaster or of Cuts.
court plaster to keep the edges of the wound
together, and to protect the cut from injury, is
sufficient; but if the wound be wide and gaping,
after carefully bringing the edges together as
above directed, a bandage should be bound firmly
round the part, and for some distance above and
below the wound, in order to give greater support
to the neighbouring flesh. At first if the wound is
painful, the dressings should be kept constantly
wet with cold water or sugar of lead lotion,* and
the whole covered with a piece of *oil silk*, the latter
retains the moisture, and prevents the necessity of
frequent wetting and consequent disturbance.

If instead of a clean cut, the wound is *torn and* Torn
wounds.

* This lotion is made by dissolving one drachm of
sugar of lead, or the same quantity of Goulard's extract, in
a pint of water.

jagged, the water dressing alone should be used till the inflammation and irritation have subsided. Sticking plaster may then be applied with advantage.

Inflamed
wounds.

When wounds of any kinds become inflamed and very painful, all other dressing should be removed, and either the water dressing or a bread and water poultice should be applied till the unpleasant symptoms are subdued.

If wounds are slow in healing they may be gently touched every morning with a piece of blue stone (sulphate of copper).

The water dressing is in all cases better than ointments and greasy applications of any kind.

Fractures.

In cases of *fractured limbs* the only steps necessary at first until medical assistance can be obtained, are perfect *rest* of the injured part and quiet of body. Draw the broken limb as straight as possible, and then put either a thin pillow or a thick pad of soft cloth round it, placing a splint* on either side which will reach beyond the joints at each extremity of the broken bone; thus, in the leg they should reach from above the knee to below the ankle. The splints should be confined

* If regular splints are not at hand, a substitute can easily be made from a piece of thin board or a split bamboo. They should be cut from one to three inches wide, about 2-10ths of an inch thick, and long enough to reach from one joint of the broken limb to the other.

in their places by two or three pieces of tape tied round them, at intervals of some inches. Should the bone have come through the flesh, a piece of wetted lint or cloth should be applied to the wound before the splints are put on. The child should be kept in bed, and an opiate may be given to it with advantage after the dressings are applied. The diet must be low, and if fever arises, a purgative should be administered as often as may be required to keep the bowels freely open.

The tartar emetic and laudanum mixture (page 92) is exceedingly useful in these cases, and in those of fever arising from wounds of almost every description.

In fractures, during the first week at least, no bandage or ligature should be applied except the tape over the *splints*, as described above. The injured parts always swell at first and are usually inflamed, a condition materially aggravated by any undue pressure, such as a bandage will necessarily produce. It is needful to be cautious even in binding the splints too closely ; all that is requisite is pressure enough to keep the bones from moving upon one another. If there is much pain and swelling, cold water or sugar of lead lotion may be employed to the part beneath the pads. When the inflammation has entirely subsided, *i. e.* about the end of ten days, the splints and bandage may be more closely applied and good

Not to be bound too tightly at first.

diet allowed, but rest of the part should be enjoined for a month at least for the arm or leg, and six weeks for the thigh. The child may be taken out into the open air after the first week.

Injuries of
the head.

In *injuries of the head*, the principal treatment consists in quiet, low diet, and cold applications to the head, with attention to the bowels. Even in severe cases accompanied by insensibility, this is at first the only treatment to be pursued; and it will be found, in nineteen cases out of twenty, that the child will by these means ultimately recover, though some days may previously elapse. Of course there *are* many cases which will not terminate so favourably, but by far the greater proportion do so.

Febrile
Symptoms
in wounds
of the head

If fever comes on in these latter cases, which it often does after the expiration of a few hours, it will be necessary to leech the head, give active purgatives with calomel, apply cold, and use the ordinary treatment for the cure of fever with head affections. In these cases the tartar emetic mixture must be given without the laudanum, recommended for fever arising from wound of other parts.

Bleeding
from
wounds.

The *flow of blood from wounds* is frequently very alarming to unprofessional observers, although in reality it is rarely dangerous under ordinary circumstances. The best means of arresting bleeding are pressure and cold. It will generally be

found, that, when a wound is bound up with moderate tightness, the blood stops without further trouble. If it do not, very cold water or ice, when it can be procured, applied over the bandage, will materially assist in obtaining the desired effect.

The only real danger from bleeding is produced by the wound of a large blood vessel, or the pouring out of blood from a number of small ones upon any extensive surface, or in a deep cavity, as the nose or mouth. In the latter cases pressure and cold continued for some time will, in general ultimately succeed, but when these means fail, or when pressure cannot be employed, *astringents* may be used in combination with cold applications. Alum or white vitriol, either in powder or in a saturated solution, may be employed for this purpose. A very powerful astringent is made by mixing equal parts of pounded ice and either of the above-mentioned substances. A solution of gall nuts or of catechu (the kut of the bazaar,) or of oak bark, are also powerful agents of this class. Where all these remedies fail in arresting the flow of blood, it may be necessary to use more powerful measures :—the application of caustic or even of hot iron, but these cases are very rare.

Dangerous bleeding.

When the bleeding arises from the wound of a large artery or vein, it is easily recognised by its violence and uncontrollable character. If it be

Severe bleeding.

from a vein, pressure by a bandage will usually suffice to arrest it. The blood in this case is dark-coloured, and flows in an even stream. When, on the other hand, the wounded vessel is an artery, the blood is of *red colour*, and it flows in an interrupted stream—by pulsation, as it were,—spouting out to a distance. This is the most serious of all species of bleeding; and if the vessel is large, it cannot be stopped unless its mouth be tied by a ligature. The bleeding from a moderate sized vessel may, however, be controlled by pressure and cold, continued for a considerable time. Even when large vessels are divided, their bleeding may be temporarily arrested by the above-mentioned means until further assistance can be procured. In stopping the flow of blood from a large artery, in addition to the pressure applied directly to the wound, pressure should be employed between the wound and the heart. Thus, in the case of a limb, a bandage should be firmly bound above the wound. Where a vein is wounded the pressure must be employed in the opposite direction, that is beyond the wound, or on the side most distant from the heart.

Burns
and Scalds.

Burns and Scalds, if severe, are best treated like blisters, with large quantities of fine cotton heaped on the injured part, and retained there by a light bandage. When the discharge from the wounds begins to grow offensive, which will

generally occur on the second or third day, the cotton should be removed by soaking with hot water or a poultice ; and the sores dressed with lint or cloths dipped in sugar of lead water and oil silk, or a poultice, or with ointment of sugar of lead, or simple ointment of wax and oil. Severe burns are usually attended by great depression at first, and the patient must be roused with small quantities of wine and water, or brandy and water. The pain if severe must be relieved by the administration of opiates ; care being taken at the same time to keep the bowels open. When the wounds are healing, the strength must be supported by nourishing food and tonic medicines, if there is much debility present. If any tendency to mortification shews itself, a poultice of charcoal should be applied to the wounds, and the following combination administered every six hours. Quinine half a grain, Carbonate of Ammonia two grains ; Dover's powder one grain for a child a year old ; half the quantity for an infant under that age ; and twice the amount for one above two years old. Wine and nourishing food must be given at the same time. These directions are applicable to mortification arising from any cause.

Mortification.

Slight Burns may be treated with cold water or bread poultice or liniment composed of equal parts of olive oil and lime-water. This is a very excellent application to burns and scalds of all

kinds. Fine flour sprinkled thickly over the part is also a very soothing and excellent remedy for these accidents.

Bites of
Insects.

The *bites of venomous insects* are best treated by a poultice or plaster of Ipecacuanha powder, and if there is much faintness attendant on the accident, sal volatile, or wine or brandy and water must be given, and opium to relieve severe pains.

Snake
Bites.

Snake bites are always productive of alarm, but they are more rarely dangerous than is generally supposed.

Treatment.

A ligature should at once be bound tightly between the wound and the heart, to prevent the absorption of the poison. The wound should then be well washed, and the bleeding encouraged as much as possible by fomentation of hot water, and by suction, where the latter is practicable. The part should next be burnt with caustic, or a red hot iron needle, or some such instrument, thrust to the

Danger-
ous Synp-
toms.

bottom of the wounds. The dangerous symptoms, when they arise, consist of extreme prostration of strength, fainting sickness, and cold sweats. The treatment best adapted to combat these distressing symptoms consist of powerful stimulants, brandy, ammonia, camphor, flagellation, &c. A tea spoonful of brandy with three drops of laudanum in water may be given every two hours, or even every half hour in urgent cases, to a child two years old. Or ten drops of hartshorn or sal

volatile (the base of Eau de Luce) may be given in a spoonful of water instead of the brandy. Mustard plasters should be placed on the pit of the stomach and calves of the legs, frictions employed over the whole body, and hot bottles constantly applied to preserve the failing warmth and circulation. These remedies must be persevered in for many hours, and only gradually left off when favourable symptoms appear, for the patient readily sinks if the stimulants are omitted.

It sometimes happens that slight accidents occur during the birth of the child; bruises, scratches, and trifling wounds. These are usually immaterial, and require no treatment. When the navel-string has fallen off, the part sometimes remains sore, and discharges matter. It should be treated with powdered alum, or flowers of zinc, and carefully preserved against injuries by a soft bandage.

Accidents
at Birth.

Sore navel.

RUPTURES.

Occasionally about the groins, and especially in male children (where they occur in the course of

Ruptures.

the testicle), swellings are observed of an elastic character, which, on pressure, may be pushed up into the belly, and which, when the child lies down, go up there spontaneously. These *are ruptures*. They require constant pressure, by means of trusses, to keep them from protruding; but they neither need, nor do they admit of, much attention till the child begins to walk about.

Ruptures
at the navel.

A swelling of this description is very common at the navel, arising usually from that part not being carefully bound during the first few days after birth. This kind of rupture should, however, at once be subjected to treatment. A bandage should be bound round the belly; and beneath it, upon the swelling, a pad containing a piece of cork or solah cut into a conical shape, so as to press fairly into the hollow of the navel. This should be used during the first few months; and if the disease is not then cured, a proper truss, to be obtained at the apothecary's, should be procured.

FOREIGN BODIES IN VARIOUS PARTS.

Large pieces of food or other substances sometimes stick in the gullet. These may often be forced down by drinking water freely, or they may be brought up again by tickling the back of the throat with a feather, so as to cause vomiting. If they cannot be removed by these means, they must be forced down by an instrument. For this purpose a thin piece of whalebone or cane with a piece of sponge as large as the end of the finger may safely be pushed down the throat, even into the stomach. But to facilitate this operation the child's head should be held well backwards, so as to make nearly a straight line from the mouth to the stomach.* Fish-bones and the like should be treated in the same way.

Much alarm is often created unnecessarily by children swallowing pieces of money, buttons, and other metallic or hard substances. These rarely produce injury, and after a time generally come away in the evacuations. It is best to leave them to nature. Pins, needles, and other similar sharp

In the
gullet.

Hard sub-
stances.

Pins, &c.

* The stomach is situated immediately below the breast bone.

pointed bodies, must be treated in the same manner; but they occasionally give more trouble by coming away from distant parts of the body after the lapse of years.

Insects. Insects speedily die when swallowed, and are digested like the food.

In the windpipe. Bodies getting into the wind-pipe, "going the wrong way," as it is called, create more immediate annoyance, and if not removed, may in the end prove serious. Small substances are usually coughed up speedily enough, but larger ones occasionally get down into the upper part of the lungs, creating constant irritation, and sometimes finally inducing permanent disease in the chest.

Treatment. It may be possible to hook out large bodies, if they only lie at the top or across the opening of the voice organ. This should always be attempted, but when lower down, they rarely admit of such treatment, and their removal must in a great measure be left to nature, which very often succeeds in driving them out after many efforts. We may, however, mechanically facilitate these efforts of nature by holding the child for a minute or two with the head downwards, and slapping it smartly on the back, repeating this operation from time to time. Large pieces of money have been removed at the expiration of several days, by this simple process, after many trials.

In the Nose, hard bodies may often be driven out by compressing the opposite nostril and the mouth, and urging the child violently to force the breath through the affected passage. If this is insufficient, the nose should be compressed between the finger and thumb above the obstruction, and the latter hooked out with a bodkin, or probe bent slightly at the end, so as to be passed behind it. Sometimes putting snuff into the nostril, or in any way making the child sneeze, will answer the purpose; but do not attempt to push the substance back into the throat. In the Nostril.

In the Ear. If the body be hard—as a shell, button, shot, &c., the part may be syringed forcibly; but if it be a pea, or any soft body capable of swelling in water, this operation must not be attempted, it will increase the mischief. The only means then employed must be an endeavour to hook out the intruder with a long bodkin or probe, bent, as described in the last paragraph. In the Ear. But sometimes this is by no means an easy operation. The application of *dry* heat will occasionally assist in these cases. In *all* cases of the kind, however, the expulsion of the foreign body should be facilitated by laying the patient's head down on the side affected; and when in this position, a smart box on the opposite ear is occasionally efficacious by the shock it produces. If an insect is the offending body, oil should be poured into

the ear. This destroys the insect, and it may be afterwards hooked out.* These are not more dangerous than other bodies in this situation.

In the
Eye.

From the Eye, irritating substances should at once be removed, if possible: their continuance leads to great pain, and often produces serious inflammation. A simple method of dislodging *small* substances is drawing the upper eyelid by the lashes well down over the under one: another consists in closing the lids, and gently rubbing with the finger over them from the outer to the inner side, then opening the lids, the discharge of tears will often wash away the annoyance. If these methods do not succeed, the lids must be forcibly drawn asunder, the surface of the eye well examined, (with a magnifying glass if necessary), and if any thing is perceived, it may be wiped away with a soft handkerchief, or a camel's hair brush or a sponge. The surface of the eye is very sensitive, but there is no *danger* in rubbing it even roughly.

* A very simple method of dislodging it also consists in pressing firmly the palm of the hand against the ear. The sudden darkness and deficiency of air thus caused seldom fail in compelling the insect to walk out.

POISONS

For the most part may be considered as of two kinds :—irritating or corrosive, such as arsenic, oxalic or sulphuric acid ; and narcotic or depressing, as opium in any form, hemp, prussic acid, hemlock, and the like.* In all cases, as a general rule, attempts should be made to remove them from the stomach by vomiting before any other remedies are employed. Some few are of themselves emetic, and require only to be assisted by copious draughts of warm water ; but usually it is necessary to give medicine to promote the act of vomiting. For this purpose tartar emetic may be used, (*vide* page 101,) or ippecacuanha powder (10 grains to a wine-glass of water), repeated every ten minutes till it acts ; or half a tea-spoonful of sulphate of zinc (white vitriol) dissolved in half a pint of water. Where nothing else is at hand, a tea-spoonful of mustard dissolved in a large wine-glassful of water will answer the purpose. The stomach-pump, of course, should be employed

* It would answer no useful purpose in this little book, to enter into a long detail of the various kinds of poisons ; indeed, I believe it would only confuse the reader. I have therefore only spoken of the more common forms likely to be met with in India.

if possible, but its use requires experience, and can hardly be resorted to without the assistance of a medical man.

Arsenic. *Arsenic* produces vomiting, great pain, faintness and thirst, followed by diarrhœa, cramps, coldness of the extremities, sinking and death. In many respects the symptoms closely resemble those of cholera.

Treat-ment. After free vomiting—which should be encouraged by drinking freely of *warm milk*—purgatives (castor oil, or compound powder of jalap) should be given, and the severe pain relieved by fomentations to the belly ; and, when the bowels have been freely cleared out, opiates must be administered; for example, from one to three grains of Dover's powder every three hours. Warm milk or white of egg in water should be given at intervals for drink.

Corrosive Sublimate. *Corrosive sublimate* is sometimes given by mistake for calomel, and produces symptoms very similar to those of arsenic.

The treatment should in many respects be the same, except that white of egg should be given in larger quantities, as it is considered a powerful antidote to this poison.

Food dressed in Copper Vessels. *Food dressed in Copper vessels* is occasionally rendered poisonous by the latter, and produces symptoms like those above detailed.

The treatment consists (after clearing the stomach well out) of opium in combination with

purgatives, thus: 2 grains of calomel and 3 of Dover's powder, repeated in 5 hours, and followed by a dose of castor oil or senna next morning. The Dover's powder and purgative may be repeated for two or three days if the symptoms continue, but in this case grey powder should be used instead of calomel.

Sugar of Lead produces extreme pain in the belly, sinking, cramps, and paralysis or palsy of the extremities, especially the arms. Sugar of Lead.

Sulphate of zinc serves as the best emetic in this case, because it is also an antidote to lead. After the vomiting Epsom salts should be given as a purgative, because it also is an antidote to this poison, and it should be repeated for several days in succession in small doses even after the acute symptoms are relieved.

Tartar Emetic produces vomiting, purging, faintness, and most of the symptoms of cholera. Tartar Emetic.

Strong green tea is said to be an excellent remedy in this case, as it decomposes the poison; but besides this it will be necessary to employ the treatment recommended for cholera.

Sulphuric, Nitric, or strong Acetic Acids, produce extreme pain in the throat and stomach, faintness, coldness, &c., but their effects are at once most evident by the destruction of the lining of the mouth, throat, &c., which appear as though they had been burnt. Sulphuric, Nitric, or strong Acetic Acids.

Vomiting in these cases is of little service. The acids should at once be neutralized by giving quantities of chalk, magnesia, or lime and water, even the whitewash from the walls if nothing else is at hand.

**Oxalic
Acid.**

Oxalic acid, besides pain, coldness, cramps, &c. usually produces free vomiting, which should be encouraged by water with chalk, lime, or magnesia as above described, for these substances neutralize the acid also, and are the only efficacious remedies which can be employed. They must be given freely and continuously after the stomach has been well cleared out by the vomiting.

**Prussic
Acid.**

Prussic acid produces extreme faintness, insensibility, and exhaustion, if it does not immediately cause death, and there is an unusual glistening and staring of the eyes. Prussic acid is also the poisonous ingredient of laurel water, cherry water, and bitter almonds, which all produce the same symptoms. The strongest restoratives must be immediately employed. The vapour of hartshorn, or sal volatile—strong smelling salts for example—must be constantly inhaled, the extremities well rubbed, and cold water dashed upon the head and shoulders, and small quantities of brandy, or sal volatile given internally till the system is roused.

Opium.

Opium in any form, whether as laudanum, black drop, morphia, solid opium, syrup of poppies, Godfrey's cordial, &c., produces drowsiness, stupor,

insensibility, hurried breathing, quick small pulse, copious perspiration, and a peculiar contracted state of the pupil of the eye.

After clearing out the stomach freely by emetics or stomach-pump, strong coffee should be given, cold water dashed on the head and shoulders, and every effort by shaking, pinching, walking about, &c., made to rouse the patient, who *on no account must be allowed to go to sleep.*

The other narcotic poisons produce nearly similar effects and require similar treatment.

Poisonous Mushrooms produce griping, cramps, thirst, diarrhœa, giddiness, stupor, and sometimes convulsions. Poisonous
Mush-
rooms.

Emetics, and afterwards purgatives, are the only remedies of any avail for this accident.

DROWNING.

If a warm bath be at hand put the child into it at once; but whether this be first done or not, place the child in bed between blankets, with the head a little raised and bottles of hot water applied to the soles of the feet and under the arms. The whole surface of the body and limbs must

then be rubbed with flannel unceasingly, and sal volatile, or strong smelling salts, applied frequently to the nose and mouth. Attempts should likewise be made to imitate natural respiration by alternately breathing forcibly into the lungs, and then expelling the air by pressing the chest. To ensure the air entering the lungs instead of passing down into the stomach, the projecting part of the windpipe should be pressed back against the spine so as to shut up the gullet when the air is being forced into the mouth.

All these efforts, but more especially the rubbing and application of heat should be persevered in for some hours, as it not unfrequently happens, unless the body has been long under water (say more than an hour) that this perseverance is crowned with success after a very long period of fruitless exertion.

When the patient shows signs of returning animation, warm tea, or weak wine and water should be poured down the throat from time to time. Ultimately after the senses are completely restored, it is occasionally necessary to leech the head, and employ purgatives to counteract the violence of reaction manifested by fever, insensibility, or delirium.

DEFORMITIES AT BIRTH.

Children are sometimes brought into the world with deformities of various kinds, few, if any, of which admit of *domestic* management. A surgeon should at once be consulted, but in most cases they admit of no relief. The most common of these deformities are—

In the *male*, closure of the extremity of the *penis*, with unusual openings into the urinary canal. Nothing can be done to remedy this condition. Male
Infant.

In the *female*, closure of the lips of the front passage, merely a small hole for the discharge of urine remaining open. Sometimes even the latter is absent. The obstructing membrane should, if possible, be divided. Female
Infant.

In *both* sexes the *fundament* may be closed, requiring an incision into the bowel to allow its contents to escape. This operation is not often successful, but should always be attempted. Closure of
the Bowel.

Children are occasionally, but more rarely than is generally supposed, *tongue tied*, *i. e.* they are unable to protrude the tongue, or to suck fairly, by reason of the tightness of the little fold of Tongue
tied.

membrane beneath it. The restriction is easily removed by nipping it with a pair of scissors.

Club feet. *Club feet, additional toes, and hare lip*, can be removed by surgical operations which may be performed at any time during infancy after the first month ; but these operations should be avoided at the time of teething.

Other deformities. Other deformities are sometimes observed, such as deficiency in the lower part of the belly, or absence of one or more limbs ; but it is unnecessary to say that nothing can be done for their relief.

THE APPLICATION OF REMEDIES.

PURGATIVES.

Under ordinary circumstances the simplest purgative for children is castor oil, in doses of a Castor Oil, tea-spoonful, *i. e.* one drachm, which may be given in syrup, or water with a drop of oil of aniseed, or, where there is much griping and wind, with five drops of Dalby.

The rhubarb and magnesia, or red mixture, is almost equally desirable, and in some cases preferable to oil.

Red mixture is thus made :

Red Mix-
ture.

Magnesia, thirty grains.

Rhubarb, fifteen grains.

Aromatic spirit of ammonia, thirty drops.

Aniseed oil, three drops.

Water, three table-spoonfuls.

A tea-spoonful for a dose—repeated every four hours till it operates.

Gregory's powder from twenty grains to half a drachm, with five grains of carbonate of soda, is a very good ordinary aperient, especially where there is much acidity present.

Gregory's
Powder.

The syrup of senna is a useful purgative, and from its pleasant taste is easily given to children.

Syrup of senna is thus made:—Take of *senna leaves* three and a half ounces, *fennel seeds*, bruised, half an ounce, manna three ounces, sugar fifteen ounces, boiling water one pint; macerate the senna leaves and fennel seeds for twelve hours in the water.

Strain, and add the sugar and manna to form syrup. Dose, from a tea-spoonful to a table-spoonful.

Senna
Mixture.

The following is a good formula for senna mixture.

Infusion of senna, four ounces.

Manna, two ounces.

Sulphate of magnesia (Epsom salts) or tartrate of soda or of potass, of either one drachm.

Tincture of senna or of rhubarb half an ounce.

Dose, from one table-spoonful to four, according to the age of the child.

Senna
Tea.

An excellent form of administering senna to children is in the shape of tea, mixed with milk and sugar. They do not distinguish it in this guise from an ordinary cup of tea, and it answers the purpose of a moderate purgative. A common-sized tea or breakfast cupful, according to the child's age, is a sufficient dose.

Scammony
and
Jalap.

In severe cases of disease, especially where the head is affected, and in inflammatory affections generally, scammony or jalap are valuable purgatives. They may be given thus:—

Powder of scammony (or powder of jalap) each four grains.

Rhubarb powder, cinnamon powder, each two grains, repeated every four hours till they operate.*

Or compound jalap or compound scammony powder may be given, in doses from ten grains to thirty, in water.

When strong purgatives are necessary, croton oil and oil of turpentine may be often used with advantage.

The dose of croton oil varies from a quarter of a drop to a drop, repeated every six hours till it operates. It may be given in syrup or in castor oil. A tea-spoonful of the latter, with half a drop of croton, is a very valuable purgative in convulsions, congestive fever, and water on the head. Croton Oil.

The dose of turpentine varies from ten drops to a dessert-spoonful; it should be mixed with an ordinary dose of castor oil. It is used in cases similar to those for which croton oil is given, and for worms. Turpentine.

From one to two table-spoonfuls of the compound decoction of aloes is a very good purgative for children, who pass white or clay-coloured stools, and have a pasty countenance. Aloes.

Calomel is a very valuable purgative in cases of *active* disease, but it should never be employed as a common aperient in ordinary cases. Calomel.

* Sulphate of potass, from four to eight grains, may be added to these powders with advantage.

Grey
Powder.

The grey powder is also a very excellent medicine in certain cases, and, being milder than calomel, is less objectionable ; but even this should not be constantly used as a mere purgative.

Treatment
of too vio-
lent dose
of Purga-
tive Medi-
cine.

When purgative medicines have been given in too violent doses, or produce an unusually severe effect, a teaspoonful of the chalk mixture (which may always be kept ready in the nursery) should be administered ; and if this be insufficient, from one-third to two drops of laudanum, according to the child's age, should be added.

ALTERATIVES.

Calomel
and Grey
Powder.

One of the most important uses of calomel and of grey powder, is in the form of an alterative in chronic diseases, internal and external. For this object these medicines require to be given in very small doses, and frequently repeated. Thus calomel and James's powder each one quarter to half a grain, prepared chalk and rhubarb each one grain every night or every other night, or two grains of grey powder may be substituted for the calomel.

When giving these medicines, as alteratives, it

is also desirable in most cases, to administer gentle tonics. As the soda and columbo powder, (page 35), or bark or cherretta with elixir of vitriol, or small doses of quinine or iron, as for example in the spleen powder (page 36).

EMETICS.

The emetic most commonly given to children is Ipeca-
cuanha wine, but it is rarely sufficient in cuanha.
India without the addition of a further portion of
ipecacuanha powder ; thus, ipecacuanha wine two
ounces, powder ditto twenty grains, mix and give
a tea-spoonful every ten minutes, till vomiting is
produced. Instead of ipecacuanha wine, the pow-
der may be dissolved in water, in the proportion
of twenty grains to one ounce of the latter, and
given in the same dose.

When a more powerful emetic is required : Tartar
one grain of tartar emetic may be added to either Emetic.
of the above mixtures. But tartar emetic is not
generally a safe medicine for children, unless in
certain urgent cases, as from its tendency to pro-
duce violent vomiting and purging, it occasionally
brings on all the symptoms of cholera. Neverthe-

less it is occasionally a most important remedy when carefully administered, especially in croup (where perhaps its value is greatest,) and in inflammation of the lungs, but even here it should be given in combination with ipecacuanha, as above described. In severe forms of fever also it is a valuable medicine when given in very minute doses, the twenty-fourth or thirty-second part of a grain every two hours, sometimes alone, at others in combination with calomel. *Vide* fever, page 31.

With Quinine in Fever.

It may also be necessary, as a protection against the exciting effects of quinine in cases of fever, where the employment of the latter remedy is of doubtful propriety. *Vide* fever, page 33.

With Laudanum in Pain.

In cases of great restlessness and sleeplessness in the advanced stages of fever, especially of typhus, even where there is delirium present—and in all cases of irritation of the system, and fever from the pain of wounds or local diseases—the greatest advantage may be derived from the administration of tartar emetic in combination with laudanum in the following form :

Tartar Emetic, one grain
Laudanum, forty drops
Water, eight ounces.

Mix and give a tea-spoonful every two or every three hours ; half the quantity for a child under

one year : a dessert-spoonful for one above three years ; a table-spoonful after five years old.

DIAPHORETICS.

Or medicines for increasing perspiration. The most powerful of these are antimonial, either tartar emetic or James's powder. The former is the most decided, but it is not always a safe medicine (*vide* page 9). James's powder in doses of from one to four grains alone, or in combination with one or two grains of calomel, every four or six hours is more manageable, and the medicine most commonly employed. Ipecacuanha too is a strong diaphoretic in some cases, especially when combined with opium in Dover's powder, but the addition of the latter drug renders it unsafe in the earlier stages of fever, or where there is any affection of the head, or when it is desirable to keep the bowels freely open. The warm bath, as hot as it can be comfortably borne, is a very excellent method of exciting perspiration. Sponging the body with tepid water, or covering it with clothes dipped in the latter, are also very desirable means of producing

Tartar
Emetic.

James's
Powder.

Dover's
Powder.

Warm
Bath.

the same effect.* Drinking copiously of warm fluids promotes materially the action of all the aforesaid remedies.

TONICS.

Food.

Children are very readily affected by tonic remedies, and where they have been reduced by any severe illness or loss of blood, they require nourishing food and strengthening medicine to restore their vigour of constitution—more urgently and earlier in the progress of disease than in similar cases of adults. Strong jugged soup thickened with arrowroot or sago, may be given two or three times daily to very young infants under these circumstances, and to children of larger growth, it may be needed to administer food of this description every three or four hours. White wine whey is an exceedingly pleasant and safe stimulant to children in doses varying from one tea-spoonful to a wine-glassful every two or three hours. In extreme cases, port wine, or what is perhaps better, good beer, is very useful occasionally, but these must be given cautiously at first.

Wine

* *Vide* page 31.

Amongst the class of tonic medicines, preparations of iron are perhaps the most valuable to weakly children. The quinine and iron powder, Iron. (page 36,) is a good formula in cases of debility accompanied by organic disease in a chronic form.

The carbonate of iron in doses from five grains to twenty in honey or syrup, is also a very useful form of administering iron to children.

Quinine too, when it does not produce diarrhoea Quinine. or headache, is an admirable tonic in small doses, from a quarter of a grain to one grain *twice* daily. It is best given in combination with some aromatic, as ginger powder or cinnamon.

The citrate of quinine and iron, in the above-mentioned doses, is an excellent form of giving Citrate of Quinine & Iron. quinine as a tonic.

Where quinine does not agree with the patient, producing diarrhoea or headache, the decoction of bark may be substituted, in doses of one to two Bark. ounces.

An excellent stomache tonic is found in the infusion of cherretta, so commonly used by the Cherretta. natives; a wine-glass full of this infusion should be given two or three times daily. All of these tonic medicines should be given on an empty stomach, the best time for administering them is an hour before eating. Quinine, bark and cherretta, are rendered in most cases more efficacious Elixir of by the addition of elixir of vitriol (aromatic sul- Vitriol.

phurie acid.) From one to four or five drops of the latter may be added to each dose of these medicines.

Columbo. *Columbo* is also a very good stomachic tonic, and may be given in doses of from five to ten grains alone, or combined with rhubarb and soda, (*vide* page 35).

COUGH MIXTURES.

Either of the following may be used.

No. 1.

Ipecacuanha Wine, and sweet Spirits of Nitre, each
half an ounce
Paregoric, six drachms
Nitre (*i. e.* Saltpetre,) half a drachm
Honey or Water, or Syrup of Tolu two ounces
A tea-spoonful to be given every three or four hours.

No. 2.

Paregoric, Oxyssel of Squill, and Ipecacuanha Wine,
each half an ounce
Carbonate of Potass, two drachms
Honey, two table-spoonfuls
A tea-spoonful every two or three hours.

No. 3.

Treacle and Vinegar, each one ounce
Paregoric, half an ounce, a tea-spoonful every two or
three hours.
Instead of the Paregoric, from ten to fifteen drops of
Laudanum in severe cases may be added to this
mixture.

BLISTERS.

The best blister for children is the liquor lyttae Liquid
Blister. or blistering liquid. This should be applied with a feather over the surface to be affected, wetting the part continually for about a minute, and the application repeated in half an hour. When the blister is formed, it should be cut with a pair of scissors, and a quantity of fine cotton—heaped over it to the thickness of an inch, and pressed sufficiently to make it adhere. If the blistering Blistering
Plaster plaster is used, it should be first held over the steam of boiling water for five minutes, and it should not be kept on the skin longer than four hours; it should be dressed like the liquid blister. If cotton is not used, cold cream or spermaceti ointment may be employed; but cotton is the most comfortable to the child, and the cleanest. It need not be changed oftener than once in two days.

LEECHES.

In applying leeches to children, care should be taken to put them, if possible, over a bone, because we are then enabled by pressure to stop the bleeding from their bites—moderate sized leeches should be chosen—the number must be regulated according to the child's age.

One leech for a child under six months.

Two ditto one year.

Three ditto two years.

Four ditto three years.

While they are drawing, the child should be kept as nearly as can be in a sitting posture, as a more rapid effect is produced upon the system in this position by the abstraction of blood than in a horizontal posture. If the child shews symptoms of faintness the leeches should be removed at once, and the bleeding stopped. In most cases, pressure upon the bites with a little cotton or burnt rag will suffice, but if this be not enough, a finger should be applied upon each bite, and retained with firm pressure against the bone below for several minutes. Should this fail, a drop of turpentine may be applied to each wound,

or equal parts of alum powder and ice. The most powerful mode of arresting the bleeding of leech-bites is the application of caustic, which should be well pressed into the wounds, so as to be brought in contact with the whole surface in its deepest part. The leech-bites must not, under any circumstance, be allowed to continue bleeding, as children are easily affected by the loss of blood, and young infants have not unfrequently died from the bleeding of a single leech being permitted to continue unchecked for some hours.

OPIATES.

Opium should only be given to infants in very minute doses. One-third of a drop of laudanum,* or a quarter grain of Dover's powder, is a fair quantity for a child under three months, the dose may be repeated, if required, in two hours, but the above quantity is sufficient to begin with. At a latter age children may take larger doses; from one drop of laudanum, or half a grain of Dover's powder to twenty drops of the former, or

* One-third drop of Laudanum is easily administered by putting one drop of the medicine into three tea-spoonsful of water, and giving one tea-spoonful for a dose.

eight grains of the latter in extreme cases; the dose being increased in the proportion of two drops of laudanum, or one grain of Dover's powder, for every year of the child's age.

The best preparations of opium for children are those above alluded to, viz., laudanum or Dover's powder; the latter is especially useful. Dalby's carminative and paregoric are also very desirable sedatives, where a powerful medicine is not requisite, as in ordinary griping pain, or as a sedative in cough.

The sweet spirits of nitre also is a mild and very safe sedative, from ten drops to a teaspoonful.

APPENDIX.

The following list of medicines will be found ample for the management of ordinary diseases at all periods of life. Indeed they are more numerous than will be generally necessary.* The doses here stated are for children only; for adults the quantity must be doubled at least.

POWDERS.

NAME.	DOSE.	USE.
Calomel	$\frac{1}{4}$ grain to 3 grains ..	Purgative in large doses. Alterative in small and repeated doses.
Grey Powder or Hydrarg-c-Creta....	1 grain to 6	Similar to Calomel but milder.
Rhubarb	$\frac{1}{2}$ grain to 10 grains..	Laxative. In small doses alterative.
Magnesia.....	1 grain to a drachm	Antacid. Laxative.
Scammony	1 to 8 grains	Actively purgative.
Jalap	Ditto, ditto	Ditto, ditto
Jalap, Compound Powder of	5 grains to 30 grains.	Actively purgative.
Scammony ditto....	Ditto, ditto	Actively purgative.
Gregory's Powder..	6 grains to a drachm.	Aperient; is compound of Rhubarb, Magnesia, and Ginger.
Tartar Emetic	1-32 pt. of a grain to $\frac{1}{2}$ grain	Emetic, in large doses. In small doses produces nausea, perspiration, faintness, and diminishes inflammation. In excess, symptoms of Cholera.

* There are a few other drugs mentioned in the foregoing pages, but they are required only for peculiar cases, and are best procured when needed.

POWDERS—*continued.*

NAME.	DOSE.	USE.
James' Powder or Antimonial Powder	$\frac{1}{2}$ grain to 4 grains..	Sudorific and febrifuge.
Dover's Powder	$\frac{1}{4}$ grain to 5 grains..	Sudorific, narcotic, restrains purging, contains Opium and Ipecacuanha, one grain of each in 10 of the powder. Is poisonous in large doses.
Ipecacuanha	$\frac{1}{4}$ grain to 10 grains..	In large doses emetic. In small ones sudorific; expectorant, nauseating, laxative.
Quinine	$\frac{1}{4}$ grain to 2 grains..	Tonic. Prevents the return of diseases (especially fever) which occur in paroxysms.
Columbo	3 to 10 grains.....	Stomachic tonic.
Prepared Chalk	1 to 5 grains	Antacid, and astringent in bowel complaints.
Compound powder of Chalk with Opium.	1 to 10 grains	Astringent, in bowel complaints. One grain of Opium in 40 of the powder.

TINCTURES AND SPIRITS, &c.

Tincture of Senna ..	A drachm to half an ounce.....	Purgative. Given chiefly in senna mixture
Sweet spirits of Nitre	5 drops to half a drachm	Antispasmodic, sedative, diuretic (i. e. produces flow of urine)
Aromatic Spirits of Ammonia.....	1 drop to 30	Stimulant, dispels flatulence.
Purgoric	10 drops to a drachm	Sedative, especially useful in cough. One grain of Opium in one ounce.
Oxymel of Squill ..	Ditto, ditto	Expectorant. Diuretic.

TINCTURES AND SPIRITS, &c.—*continued.*

NAME.	DOSE.	USE.
Blistering liquid . . . . .	.....	Externally applied.
Æther	1 drop to 30	Stimulant.
Laudanum	$\frac{1}{2}$ to 10 drops	Narcotic. Restrains purging. One grain of Opium in 29 minims.

SALTS, &c.

Epsom Salts	5 grains to a drachm.	Purgative. Best given in Senna mixture.
Castor Oil	1 drachm to $\frac{1}{2}$ an oz.	Purgative.
Tartrate of Potass ..	Ditto ditto	Milder than Epsom Salts.
Sulphate of ditto ..	Ditto ditto	Ditto.
Carbonate of Soda ..	1 to 20 grains	Antacid—assists digestion.
Sugar of Lead	$\frac{1}{2}$ grain to 3 grains..	Astringent internally in bowel complaints. Externally soothing, mixed with water, in the proportion of one tea-spoonful to a pint of the latter, and applied to wounds, bruises, &c.
Blue Stone . . . . .	.....	Externally applied to wounds to stimulate them
Caustic . . . . .	.....	Ditto ditto.
Lint . . . . .	.....	Applied to wounds.
Sticking Plaster....	.....	Ditto.
Ointment of Sugar of Lead . . . . .	.....	Ditto.

TABLE OF WEIGHTS AND MEASURES.

SOLID MEASURE.

Marked thus :

20 grains*	make	.....	one scruple	ʒj
3 scruples	„	.....	one drachm	ʒj
8 drachms	„	.....	one ounce	ʒj
12 ounces	„	.....	one pound	℔j

FLUID MEASURE.

60 drops or minims	make one drachm	{ equal to one ordinary sized tea-spoonful.
8 drachms	one ounce..	{ equal to two ordinary sized table-spoonfuls.
16 ounces	one pound or pint.	

* The grain weights are usually marked with dots corresponding to their numbers thus : $\left| \begin{array}{c} \circ \\ \circ \end{array} \right| \begin{array}{c} \circ \\ \circ \end{array} \left| \right.$ &c., &c.

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A D D E N D A.

OF POULTICES,

FROM DR. SOUTH'S HOUSEHOLD SURGERY.

FEW persons have not heard of JOHN ABERNETHY, one of the first Surgeons of his time, and he to whom must justly be ascribed the praise of having urged on those of his own particular class in the profession (at a time when a Surgeon's duty was held to be almost entirely confined to *cutting*), the importance of connecting Medicine and Surgery together; for although split, by custom, into these two branches, he maintained that "Medicine is more one and indivisible than the French Republic." Upon this foundation was his celebrity built; and his example led Surgeons generally to study medicine as a powerful auxiliary to the practice of their own particular branch, and no longer to despise it and be thankful they knew nothing about it, as a celebrated teacher once told his class.

With a large and comprehensive mind, ABERNETHY did not despise the day of small things; he did not think lightly of what many consider little matters in Surgery, not worth knowing to a practitioner, and

still less fitting to attract the notice of a professor and teacher. Hence his painstaking to impress on his pupils the importance of knowing

How to make a Poultice.

"Blessings or curses," as he used to say, "as they are well or ill made." And accordingly when Professor of Surgery at the Royal College of Surgeons, he described with great humour, as he was accustomed, to his own private class, how this important branch of Surgical Cookery should be managed, and made the following apology for so doing, in his own peculiar but impressive style:—"A pretty fellow, truly, are you, to be appointed Professor of Surgery to the Royal College of Surgeons; could you find no other subject better worth the attention of your audience than poultices? But I said, if any young Surgeon has had a troublesome disease to deal with, it would be good for him that he had been in trouble, for poultices are either blessings or curses, as they are well or ill made, and more commonly, as they are made, only irritate, instead of doing good."

According to this great Professor of the Art, poultices are of two kinds, the *evaporating poultice* or *local tepid bath*, and the *greasy poultice*, each of which serves a special purpose, and must be employed according to circumstances.

"The most soothing application for local disease," said ABERNETHY, "is tepid bathing, and this we can manage by putting on a poultice, being careful that the person is

kept in bed, otherwise the poultice will serve the purpose of a cold bath. The poultice of which I am fond above all others, is

The Bread and Water Poultice, or Evaporating Poultice.

“And I tell you the mode of making it. Seald out a basin, for you can never make a good poultice unless you have perfectly boiling water; then having put in some hot water, throw in coarsely crumbled bread, and cover it with a plate. When the bread has soaked up as much water as it will imbibe, drain off the remaining water, and there will be left a light pulp. Spread it, a third of an inch thick, on folded linen, and apply it when of the temperature of a warm bath. It may be said that this poultice will be very inconvenient, if there be no lard in it, for it will soon get dry; but this is the very thing you want, and it can easily be moistened by dropping warm water on it, whilst greasy poultice will be moist, but not wet.”*

A poultice thus made, may be the *vehiculum crassum* of the doctors, the *stock* of the cooks, to be medicined or seasoned with laudanum, or poppy water, with carrot or horse-radish juice, or with decoctions of herbs anciently known by the name of *stoups*, with which the patient or the doctor may be inclined to medicate it, instead of

* ABERNETHY did not mean by this, that the bread and water poultice was wished to become dry, but rather that it should be *disposed to dry* by the evaporation of the water from it, and that as this occurred it should be again moistened so as to keep up the evaporating capability.

loading an already irritable and very sensitive part with a heap of hard poppy-shells, or scraped carrots and horse-radish, called poppy, carrot, and horse-radish poultices, but which increase rather than allay the sufferer's pains.

When vegetables—as carrots, horse-radish, and others—are used to medicate poultices, they should be bruised, put into a pot, covered with water, and simmered for about half an hour. The juice is then to be strained off and mixed with bread and water or linseed-meal, to the consistence of a poultice. The poppy fomentation may be used with bread or meal in the same way.

The Linseed-Meal or Greasy Poultice

Is, on the authority already quoted, to be made in the following manner:—"Get some linseed powder, not the common stuff full of grit and sand. Scald out a basin; pour in some perfectly boiling water; throw in the powder, stir it round with a stick, till well incorporated; add a little more water and a little more meal: stir again, and when it is about two-thirds of the consistence you wish it to be, beat it up with the blade of knife till all the lumps are removed. If properly made, it is so well worked together, that you might throw it up to the ceiling, and it would come down again without falling to pieces; it is, in fact, like a pancake. Then take it out, lay it on a piece of soft linen, spread it the fourth of an inch thick, and as wide as will cover the whole inflamed part; put a bit of hog's lard in the centre of it, and when it begins to melt, draw the edge of the knife light-

ly over and grease the surface of the poultice. When made in this way, oh ! it is beautifully smooth : it is delightfully soft ; it is warm and comfortable to the feelings of the patient. So much for the greasy poultice.”

The Bran Poultice

Is a sort of “entire,” or half-and-half, partly poultice, partly fomentation ; and is a very good application for setting up and keeping up perspiration on a part ; but it requires to be often changed, for it very quickly becomes sour, and then has not the most agreeable smell. It merely consists of bran moistened, but not made wet, with hot water ; and enough of it should be put into a flannel bag, sufficiently large to cover the part, to fill it about one-third ; if more bran be put in, the bag becomes unpleasantly heavy. It must then be held before the fire, and the bran turned about again and again till it is thoroughly heated. Thus warmed, it must be quickly applied, and the bran should be gently spread, so as to cover the whole extent of the bag.

Stimulating Poultices

Are required for two purposes—either to hasten the separation of a dead part or slough, or as it is called in vulgar language, “a setfast,” or “core ;” or to irritate the skin where it is inconvenient to apply a blister, or for the purpose of rendering the operation of a blister more speedy. For the first of these objects, yeast, stale beer-grounds, or treacle, is used ; for the second, mustard.

Yeast Poultice

Is made by mixing a pound of flour, or linseed-meal, or oatmeal with half a pint of yeast or beer-grounds. The mixture is to be heated in a pot, carefully stirred, to prevent burning, and when sufficiently warm, must be spread on linen like any other poultice.

Treacle Poultice

May be made according to the same proportions, heated and applied in the same way.

Mustard Poultice

Is a most excellent and safe application. It is generally recommended to make it by mixing half a pound of mustard with the same quantity of linseed-meal or oatmeal, and sufficient boiling vinegar to a poultice consistence. Some use only mustard and boiling water, making the poultice of the usual stiffness.

Now it so happens, I have had, for many weeks together in my own person, nightly experience of mustard poultices, and have found mustard and water quite sufficient for the purpose required; and cold water will do as well as that which is warm, though the latter, however, is more agreeable to the feelings at first than a cold mustard poultice; but the discomfort from the cold ceases in the course of two or three minutes, and soon is there heat enough, and to spare. If you wish to have a mustard poultice act quickly, mix it with hot or cold water as you please, as thick only as you would have it mixed for the dinner table, and you will have no reason to complain of it not performing its duty well.

Two things are to be remembered in applying a mustard poultice. Do not let it be applied immediately to the skin, for after it has remained on the proper time, a quarter or half an hour, which will inflame the skin sufficiently, the part will be so exceedingly tender, that the removal of the poultice, with the handle of a spoon and sponge, will be a very difficult matter, and unless it be got off entirely, the patient will suffer a martyrdom. Therefore, spread the mustard about a quarter of an inch thick on a piece of fine muslin, and the muslin next to the skin, and the watery part will act well through the muslin. The second thing to be done, is after the poultice has been removed, to clear off quickly and lightly with a soft warm wet sponge whatever of the mustard remains on the skin, which must then be gently dried with a soft handkerchief.

If a mustard poultice be put on a child, it should be taken off two or three minutes after the skin reddens.

Cold Poultices

Made with bread and cold water, or bread and lead-wash or Goulard's water, as it is commonly called, are favourites with some people, but not with me. For they are not only disagreeable from their coldness, at first—which, however, soon ceases after being worn a short time, as they become tepid; but also from their harshness. If ever used at all, they should be made with hot water, which renders them soft, and when they are cooled may be applied; but I like them not.

OF FOMENTATIONS.

FOMENTATIONS are warm fluids applied for the purpose of encouraging perspiration on the skin, and thereby to diminish inflammation, and to render the skin yielding, so that the swelling which accompanies inflammation may be less painful, by the greater readiness with which the skin yields, than when it is harsh and dry. For the same reason, that of encouraging the skin to yield, fomentations are good applications to bruised parts, in which more or less blood escaping from the vessels that have been burst by the bruise, puffs up the skin and produces swelling of the injured part.

The common mode of using a fomentation is to dip into it a sponge or piece of flannel, and then either to squeeze the fluid from it over the part, or to pass the sponge again and again over it, making slight pressure till the sponge be emptied ; and then dipping it into the fomentation, to repeat the same proceeding again and again, for the space of a quarter or half an hour ; which done, the part is said to be well fomented, or “ fermented,” as the

nurses call it. And truly a pretty ferment it is ; for the patient's immediate neighbourhood is deluged in wet ; and if from circumstances the operation have been performed in bed, the bed-linen and blankets, and the bed itself, are sopped through and through, and the patient obliged to lie in a wet, uncomfortable state, from which he runs a fair risk of catching severe cold, or he must be moved into another bed, which is not always convenient. And even if no mess be made, which is scarcely possible, the person already suffering from pain is wearied with the continued exposure and frequent dabbing with the sponge or flannel, and, if fortunately he escape harm, does not derive half the benefit he would by properly using the fomentation.

The *proper mode of fomenting* makes comparatively little mess, and does not in the least fatigue the patient. A common jack-towel, three or four fold thick, or what is still better, if at hand, a piece of oiled silk or cloth, or even a leather, should be smoothly spread on the bed, beneath the part to be fomented. Three or four pieces of thick house-flannel or of blanket are to be cut, each of sufficient size to enwrap completely the limb, or to cover the belly or chest, whichever be the part to be fomented. Another piece of oiled cloth, or two or three thicknesses of jack-towel, of rather larger size than the flannel, are also to be provided.

The fluid to be used as fomentation should be put in a pan or pail, and heated as hot as feels comfortable to the part on which it is to be applied. It is usual to recom-

mend it of such warmth as the hand will pleasantly bear ; but this is a very careless proceeding, for nine times out of ten the hand of the person who applies the fomentation has been accustomed to hot water a few degrees below scalding, and bears it with as little inconvenience as the blacksmith picks up a hot horse-shoe which would burn to the bone the hand of one not accustomed to handle hot iron. The consequence, then of this hand-trial of the heat of the liquid is, that though the fomenter finds it pleasantly warm, the fomentee feels it scalding hot. This seemingly trifling point must, therefore, not be forgotten ; nor must it be overlooked that the heat of the fomentation should be kept up by continually adding a little more of the hot fluid, as may be needful.

All things being now ready, the business begins by plunging the flannel or blanket into the fomentation, in which it should remain covered over till thoroughly soaked, and heated to the heat of the fluid. At the first dipping, the fomentation must be hotter than afterwards, because the flannels, which are cold, will lower it, and therefore not get the desired warmth. In about five minutes the flannel will have soaked and warmed thoroughly ; one piece must then be taken out, wrung dry as quickly as possible by two persons, spread out, and wrapped round or laid upon the part to be fomented, and then the flannel quickly overwrapped with oiled silk or a jacketowel, and the limb gently laid down on the bed. A flannel thus managed will keep its warmth for ten minutes or a quarter of an hour, or even longer, and may then be

immediately replaced by another soaked flannel, which has been wrung out and made ready while the first is being removed. In this way a part may be fomented for hours without the least fatigue to the patient, or chance of his catching cold ; and there is not a part of the body which cannot in this way be easily and agreeably fomented.

Occasionally it happens that very large surfaces of the limbs or body may be advantaged from the application of moist heat, and a poultice for that purpose is not unfrequently ordered ; but when a poultice is large, if of linsced meal, it is very heavy and if of bread both heavy and wet ; both are liable to smear about the bed-cloths, and as the crumbs get dry, they render the patient very uncomfortable by sticking into him. In such cases a fomentation, applied as directed, in every respect answers the same purpose, is more manageable, and without any of the inconveniences of the poultice.

Some parts of the foot and leg, and the hand and fore arm, can be most easily and effectually fomented by putting the former into a pail, and the latter into a tongue-pan or foot-pan, either of which is to be filled with the warm fomentation sufficiently to cover the part to be fomented. The heat of the fluid must be kept up by occasionally pouring in more which is hot.

DIFFERENT KINDS OF FOMENTATIONS.

THE fluids used for fomenting are of various kinds ; and most people have some one or other to which they are specially attached.

Warm Water

Is the most simple, most ready, and oftentimes as useful a fomentation as can be employed.

Poppy-Water.

Take four ounces of dried poppy heads ; break them to pieces, empty out the seeds, and put the shells into four pints of water, boil for a quarter of an hour, then strain through a cloth or sieve, and keep the water for use.

Mallow-Water.

Take four ounces of dried mallows, and boil in four pints of water for a quarter of an hour, and strain.

Sometimes two ounces of camomile flowers are boiled with either of these ; but I do not know that they are of much service.

Vapour Bathing

Is often of great service in stiffness and swelling of joints or of other parts, and may be managed with little difficulty, with apparatus which may be constructed of common household utensils. The part to be steamed must be placed under a cradle* or under a light wicker basket of sufficient size to cover without being close to the part. Over either of these a thick blanket or two is to be thrown and carefully pressed around it, so as to make a close chamber. To furnish the vapour, a funnel, either earthenware or tin, must be turned with its wide part over the top of a large

* To be made as described at p. 215 of South's Household Surgery.

saucepan or of a tea-kettle, from which the lid has been removed, and both bound together with a thick soft cloth. The tube of the funnel must be inserted into a piece of lead pipe about eighteen inches long, which must be curved and the two bound together with soft cloth ; and to the other end of the lead pipe, a hollow cane, or joint of a fishing rod, a yard in length, must be attached. By this contrivance the saucepan or kettle being kept boiling on the fire, the steam can be readily conveyed under the cradle or basket, the end of the hollow cane having been passed beneath the covering blanket at the greatest distance from the part to be steamed. Care must be taken not to get up the steam too fast, nor to keep the water boiling too briskly, nor to direct the end of the tube so that the steam should rush against the ailing part, as the result of inattention to these circumstances will be scalding. The water in the pan or kettle should be made to boil and the steam allowed to stream forth before the end of the pipe, which should have been previously so arranged that it can be directed towards the top of the basket, is put beneath the blanket. This having been done, it will be sufficient to keep the kettle gently boiling or simmering to furnish the necessary quantity of steam, and five or ten minutes will be long enough to continue the process.

If it be inconvenient to bring the patient near the fire, the funnel may be turned over the top of a tea-urn (without its lid) which has been filled with boiling water and kept boiling with its red-hot heater.

A DRY FOMENTATION.

THIS may seem a very paradoxical expression ; but " what's in a name," if it convey what is meant ? Dry heat is occasionally very useful, and the dry fomentation furnishes it easily, and retains it.

A thin flannel bag must be made rather larger than the part to be covered, and this is to be half filled with camomile flowers or hops, and then sewn up. Thus prepared, the bag may be held before the fire, turned from side to side, shaken up again and again, till the contents be thoroughly heated. Or it may be equally well managed, and sometimes more conveniently, by putting coals in a warming-pan, and passing it over the camomile bag again and again till it be sufficiently heated. The bag must then be quickly applied to the part, and covered with a napkin. It is always well to have a couple of camomile bags in use at the same time, so that one may replace the other as soon as that which had been put on begins to feel cool.

Another dry fomentation is made by filling a bag with salt, and holding it before the fire till thoroughly heated. It is then applied as warm as the person can bear, but it is objectionable on account of its weight.

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